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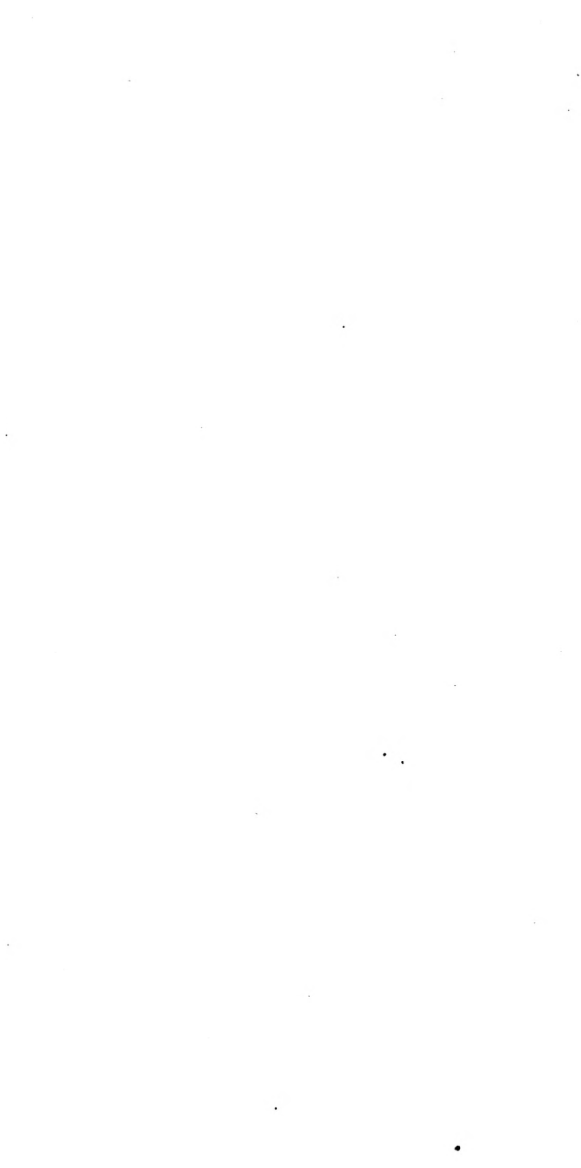
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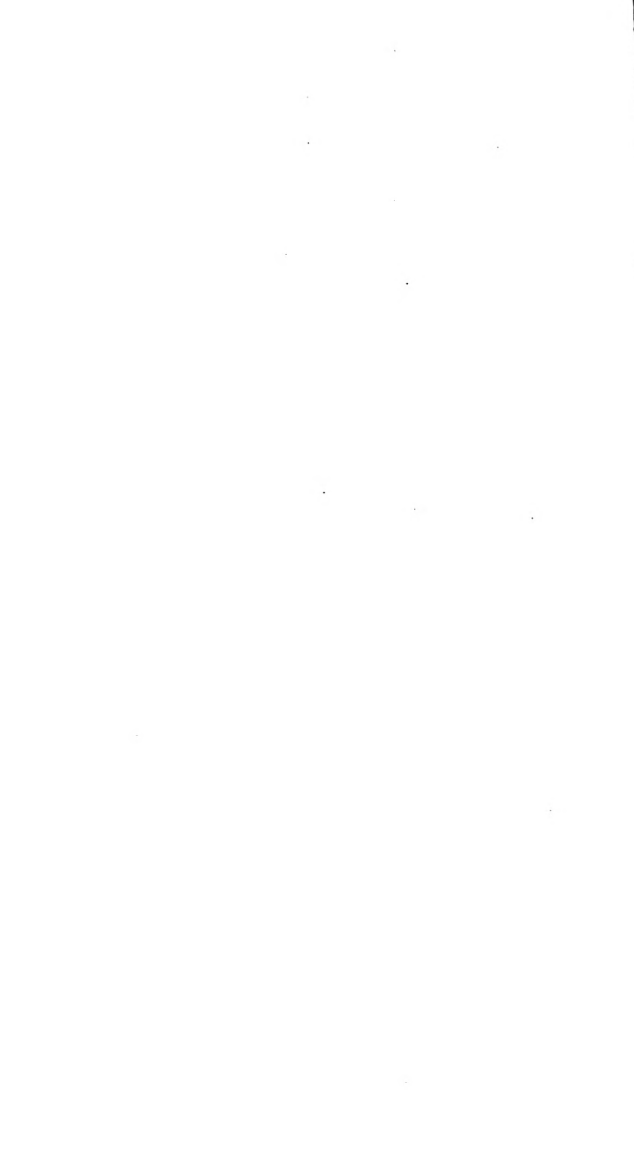
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AMERICAN COLONIAL HANDBOOK

A READY REFERENCE BOOK OF FACTS
AND FIGURES, HISTORICAL, GEOGRAPH-
ICAL, AND COMMERCIAL, ABOUT . . .

CUBA, PUERTO RICO, THE PHILIPPINES,
HAWAII, AND GUAM

BY
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Of the Standard Dictionary Staff

ASSISTED BY
MARIA SOLTERA AND MAURICE MAGNUS

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PREFACE.

The object of the AMERICAN COLONIAL HANDBOOK is to present, interestingly, on an original plan, and within a convenient limit of size and space, a bird's-eye view of territory ceded or annexed to the United States during 1898, or at present in the safe keeping of the United States military and naval forces.

The most reliable of the world's authorities have been consulted and compared for historical, geographical, and general data. There is a responsible authority behind every statement made, every answer given. Random or hearsay assertions find no place, knowingly, within any of the sections.

Numerous historical facts appear now, for the first time, in English. This is also true of much information under various other headings. The best cyclopedic works of continental Europe yield important historical and geographical data unobtainable from any other source. A list of authorities in English and other languages will be found at the end of each section.

To Maria Soltera (Miss Mary Lester), and Mr. Maurice Magnus, whose hearty cooperation has been continuous during the preparation of this book, great credit is due for skilful, conscientious, thorough labor in the several branches of investigation. Their invaluable aid as translators and compilers, and their good judgment in all matters pertaining to general research and classification, have contributed largely toward securing what, it is hoped, will prove to be satisfactory results.

T. C.-C.

New York, March, 1899.

THE PEACE TREATY.

SYNOPSIS OF ITS PROVISIONS WITH REFERENCE TO RELINQUISHMENT AND CESSION OF TERRITORY.

1. Spain renounces all right of sovereignty over Cuba.

2. Spain cedes to the United States the island of Puerto Rico, and the other islands now under her sovereignty in the West Indies, also the island of Guam, in the archipelago of the Marianas or Ladrones.

3. Spain cedes to the United States the archipelago known as the Philippine Islands, which comprise the islands situated between the following lines:

A line which runs west to east near the 20th parallel of north latitude, across the center of the navigable canal of Bachi, from the 118th to the 127th degrees of longitude east of Greenwich.

From here to the width of the 127th degree of longitude east to parallel 4 degrees 45 minutes of north latitude.

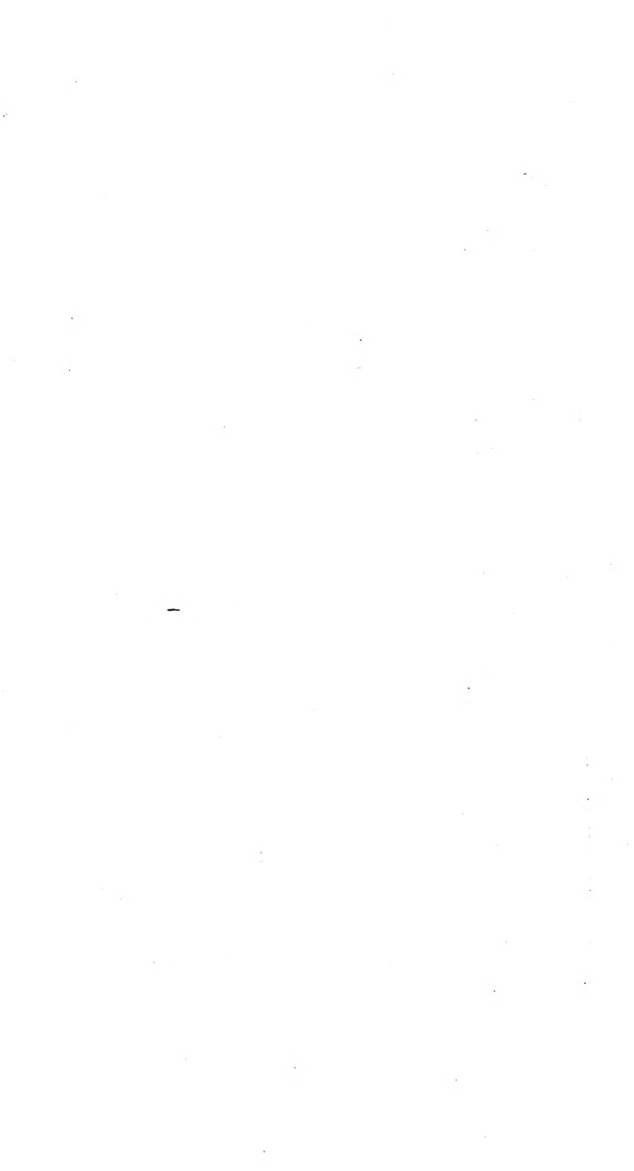
From here following the parallel of north latitude 4 degrees 45 minutes to its intersection with the meridian of longitude 119 degrees 35 minutes east from Greenwich.

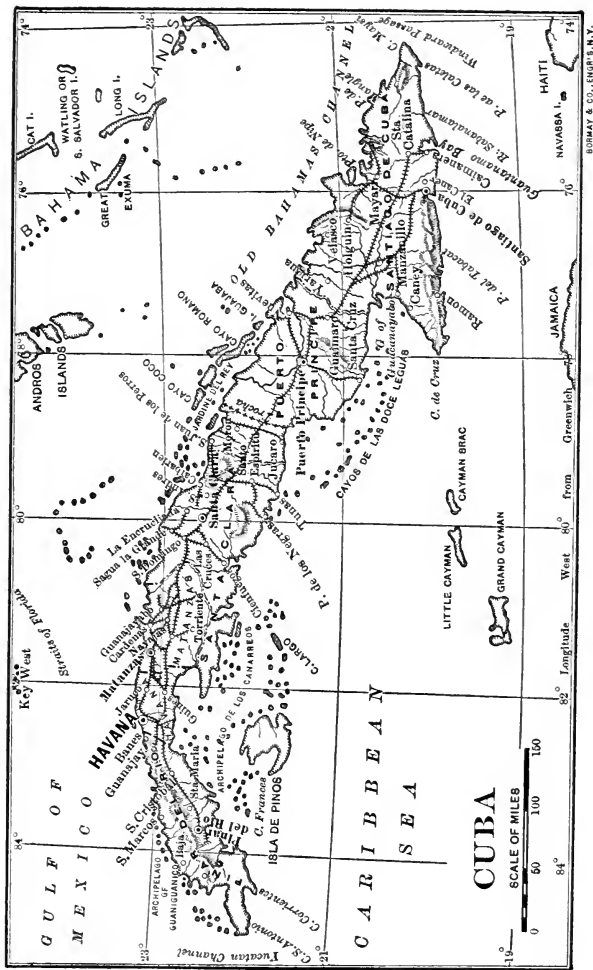
From here following the meridian of 119 degrees 35 minutes east to the parallel of latitude 7 degrees 40 minutes north.

From here following the parallel of 7 degrees 40 minutes north to its intersection with 116 degrees longitude east.

From here along a straight line to the intersection of the 10th parallel of latitude north with the 118th meridian east.

From here following the 118th meridian to the points whence began this demarcation.





AMERICAN COLONIAL HANDBOOK

SECTION 1.

CUBA.

HISTORICAL.

The island was discovered by Christopher Columbus October 27, 1492. The natives called it Cuba, but Columbus named it Juana, in honor of Don Juan, the son of Ferdinand and Isabella of Spain. Altho he visited the island on several occasions, Columbus to the last believed that it formed a part of a large continent.

DISCOVERY OF CUBA

In 1508, Nicolas of Ovando, governor of the island, commissioned Sebastian of Ocampo, by special mandate from the court of Spain, to survey the coasts of Cuba. This being effected, it was conceded that the island was worthy of being made a colony by reason of its excellent situation and the safety of its ports.

A desirable harbor was selected as a repairing dock, and called Carenas, from the Spanish *carenar*, to repair. This is now known as the port of Havana.

In 1511, Don Diego Columbus, son of the discoverer, undertook the conquest of the island and the establishment of a colony within it. He gave the command of the expedition and of the troops to Diego Velasquez, one of the fellow-voyagers of his father. This invading force exceeded three hundred men. An occupation was effected, as the natives were unable to resist firearms.

CONQUEST BY SPAIN

Many Indians, refusing to live under Spanish rule, fled to the western extremity of the island. Among these was the Cacique Hatuey, almost the only opponent of the Spanish expedition, when it disembarked in the port of Palmas, close to Cape Maysi.

Hatuey attacked the invaders. His forces were defeated and dispersed, and he was taken prisoner. Velasquez, following the custom of the time, regarded his captive as a rebellious slave and condemned him to the flames.

EXPLORA- TION OF THE ISLAND

Apart from this deed, the administration of Velasquez produced satisfactory results in Cuba. Historians agree in recognizing his great administrative ability. It was under his orders that the island was explored by Panfilo de Narvaez and Bartolomé de las Casas, afterward bishop of Chiapas. These commissioners estimated the population at that time to be 200,000. They reported that nine of the provinces were governed by caciques, and that the majority of the dwellings were composed of guano.

FOUNDING OF CITIES

In 1514, with the object of peopling the country, Velasquez created the towns of Santiago, Trinidad, Puerto Principe, and Sancti Spiritus, and, a year later, the port of San Cristóbal de Habana. In 1524—the year in which Velasquez died—Africans were imported into Cuba.

It was not, however, until 1547 that extensive business was transacted in Cuba. With the object of employing negro labor, the exploitation of the copper mines of Escambray and others was undertaken.

The natural indolence of the natives, however, together with the invasion of pirates attracted by the reputation of the excellent copper—which, for a while, was exported to Spain at the rate of 2,000 quintals yearly—entirely closed this industry.

In 1535, the first sugar refinery was established at Havana; another in Guaicanamá (now Regla) in 1598, and others in Cidra and Canémar in 1646.

FOUNDING OF PROVINCES

The provinces of the island were, at this time, organized partly by means of grants made to the colonists by governors Las Casas, Vasco-Porcays, and others; but the majority were gifts of land which, under the name of Mercedes, were accorded to settlers by municipal councils.

The profits of the land were at that time conceded to the colonists as a sole privilege; but in 1819 the holders of these Mercedes became entire proprietors of the soil they occupied. The estate hacienda Guanamón, in 1552, and those of Jumento and Manicaraga, in 1556, were the first lands acquired by the Mercedes grants. In 1729 such grants were entirely prohibited.

DESTRUC- TION OF HAVANA

In 1538, the island suffered greatly from invasions of buccaneers, who, incited by greed, overran with fire and sword the Spanish possessions in America. The majority of these were Dutch, French, and English. Their plan was to seize territory and place it under the protection of the country to which they belonged. They made a concerted movement on Havana, invaded the city, and reduced it to ashes.

The governor of Cuba, Don Hernando Soto, left the

city, placing Don Bartolomé Ortiz in command. The blossom of the island suffered severely under Hernando Soto's rule, and by 1560, all Indians were exterminated. De Soto, in 1539, left the province on an expedition to Florida, appointing his wife, Inez de Bobadilla, as his lieutenant, and associating with her as colleague, Juan de Rojas.

The construction of the castle of La Fuerza was begun during the same year. It was completed in 1544. In 1589, Don Juan de Tejeda, the first captain general of the island, was installed, with residence at Havana.

About this time the planting of sugar and tobacco became an important industry in the neighborhood of Havana. Tobacco, however, had been much cultivated in the middle of the previous century at Santiago de las Vegas.

SUGAR AND TOBACCO PLANTING

The island was still disturbed by the invasion of pirates, and although, in 1604, the aggressive buccaneer Girón had been apprehended and slain by the inhabitants of the little town of Yara, this by no means put an end to the depredations of adventurers.

The French pirate, L'Olonois, in 1658, decapitated ninety-six men who had been sent in a boat to capture him. Morgan, on another occasion, sacked Puerto Principe. Lord Windsor, in 1662, attacked Santiago de Cuba, destroying the edifice known as "Alto de Asuno."

In 1693, Matanzas was founded, and was peopled at first by families from the Canary Islands. During the same year, in 1693, the construction of vessels of war was commenced, and in 1772, 125 were completed, two of which mounted 120 guns.

BUILDING OF WAR VESSELS

In 1741, Vernon disembarked in the bay of Guantánamo (to which he gave the name of Cumberland); but this invader, in the attempt to capture Cuba, was compelled to re-embark with great loss.

In 1748, in the district of Wajay, the first coffee plantation was laid out. The seeds of the plant were brought to the island from San Domingo by Don José Antonio Gelabert; but it is said that the plant was introduced by French emigrants at the end of the past century.

Printing was introduced into Santiago de Cuba in 1695, and into Havana in 1727. The Royal University of Havana was founded in 1728.

In June, 1762, an English fleet laid siege to Havana. An heroic defense was made, but two months later the English took possession of the town, and forced capitulation. Their domination did not extend over the whole island, but extended only over Matanzas and Mariel.

ENGLISH CAPTURE HAVANA

During the siege and attack, the governor of Havana, Juan de Prado de Porto-Carrero, defended his position with distinguished valor. He died as a result of his wounds. At the same time his second in command, the Marquis Gonzalez, and many others, were killed.

CUBA EX- CHANGED FOR FLORIDA

The English occupation continued nine months. In the treaty of peace celebrated in Paris between England, France, and Spain on the 10th of February, 1763, the island was returned to Spain in exchange for Florida. On the 30th of the following July Count Riela arrived as a chief commissioner, bringing with him two thousand troops, commanded by General A. O'Reilly.

Emigrants from Florida arrived in 1793, and in 1795 French emigrants reached Cuba from San Domingo. To the latter the island is indebted for the introduction of the Castilian bee, which produces the celebrated white wax.

In 1772 the first newspaper was published in Havana, entitled the *Havana Gazette*. In 1793, the *Papel Periódico* was issued, which afterwards was known as the *Aviso*, and ultimately as the *Diario de la Habana*.

In 1809, the island was divided into bishoprics, and the Court of Audience was translated from San Domingo to Puerto Principe.

PROGRESS OF CIVILIZA- TION

During the above period of about forty years, between the first newspaper issue and the establishment of bishoprics, many marked advances were introduced in the civilization of Cuba. Greater order prevailed in the conduct of the government and of the police; streets were named and numbered; theaters were well lighted; public libraries were opened, and many benevolent societies were organized and supported. Several scientific explorations were also undertaken.

The declaration of the freedom of mountains and plantations in 1815; the liberty of cultivation of tobacco without tax, and the abolition, in 1817, of trade in slaves, were all steps conducive to the prosperity of the island.

In 1819, as stated above, the holders of the Mercedes grants became lawful proprietors of their lands; the first steamboat appeared, and a philharmonic society was established.

DISCONTENT BREEDS REBELLION

The publication of a statistical chart and a topographical map of the island in the years 1827 and 1829 proved of immense assistance in exploiting the resources of Cuba; but the increasing fame of its wealth inundated the country with adventurers from all parts of the earth, and the heavy taxation imposed by the mother country led to complaint and distrust, which year by year steadily developed into open rebellion.

UNITED STATES CON-TEMPLATES PURCHASE

In 1845, the Senate at Washington discussed the purchase of the island of Cuba. In 1846, an American company was formed to buy Cuba for \$200,000,000. Colonel White gathered 1,500 men to free the island with the aid of the Cuban creoles. The Federal government interfered.

Under Narciso Lopez, a Venezuelan, who formerly fought in the Spanish army against Bolivia and, who, in 1823, had followed the Spaniards as captain to Cuba, and later had fought in Spain against the Carlists, the "*Junta promovedora de los intereses politicos de Cuba*" was formed. Lopez had previously been elected to the Cortes and received the governorship of Trinidad through the influence of Espartero, but lost this latter appointment at the downfall of his patron.

Then he planned an insurrectionary movement in Cuba, but was betrayed and fled to North America. Here, in conjunction with American military officials and the *Junta promovedora de los intereses politicos de Cuba*, he organized an expedition against Cuba.

Knowing the island as a former Spanish soldier, Lopez landed with 600 men at Cardenas, May 19th, 1850, but was obliged to retreat. On his arrival again in the United States he was arrested and tried at both Savannah and New Orleans. On both occasions this brave adventurer was acquitted.

LANDING OF LOPEZ

He reorganized a second expedition of 453 men which started August 3, 1851, for Playtas, west of Bahia Honda, where he landed nine days later. The Captain-General, José de la Concha, was prepared for the invasion, and as Lopez received no aid from the inhabitants, he was defeated in the skirmishes of Pinar del Rio, Candelarias, and Frias.

Eventually, most of the invaders were captured and Lopez was publicly executed at Havana on August 30th of the same year.

This disastrous invasion aroused the enthusiasm of the Southern States to annex Cuba. In 1854 the Emancipados were freed, adding to the bitter feeling then existing in the South. Annexation was again proposed, and affairs were so strained that a war with Spain seemed near at hand. This unsettled condition continued during the administration of Presidents Pierce and Buchanan. The outbreak of the Civil War overshadowed the Cuban issue for the time being.

ANNEXATION PROPOSED

The cholera visitations of 1833, 1850, and 1867 proved sadly inimical to the prosperity of the island. Furious hurricanes, too, devastated its most flourishing domains, bringing death and destruction alike to man and beast.

TEN YEARS OF CIVIL WAR

In 1868, on the plains of Yara, began the internal war, which lasted ten years, Agriculture and commerce became partially paralyzed, and large estates, especially those in the vicinity of Puerto Principe and Santa Clara, were practically ruined.

It was not until the year 1878 that this inglorious war was terminated by the peace of Zanjón. By the efforts and conciliatory policy of General Martinez-Campos the combatants effected a compromise. The constitution of the monarchy of the 30th of June, 1876, was promulgated, important reforms were inaugurated, and a modern civil code, framed to meet the requirements of the Cubans, became law.

ABOLITION OF SLAVERY

In 1886, slavery was completely abolished.

In 1889, the deficit in the Cuban revenue amounted to \$3,000,000.

In 1892, the discontent and dissatisfaction of the years since the peace of Zanjón found outlet in the organization of a new revolutionary movement. Many of the military leaders who had fought in the previous insurrections took an active part in this latest effort of actual independence.

In 1893, the Spanish government, as a concession to the demand of the Cuban Autonomist party for universal suffrage, carried a law through the Cortes granting the franchise to every adult male Cuban able to pay a poll-tax of five pesos.

EXPERIMENTAL SPANISH LEGISLATION

This conciliatory measure was at first rejected; then it was accepted; the total result was disappointment.

In 1895, General Martinez-Campos was placed in command of the army intended to repress the new revolt. In spite of his endeavors, both in field and council, his efforts were unavailing.

The years 1895, 1896, 1897 witnessed a continuation of hostilities. Finally, through the armed intervention of the United States, Cuba was released from Spanish rule.

By the terms of the Treaty of Peace, signed at Paris on December 10, 1898, Cuba passed into the hands of the United States government, with effect from January 1, 1899. It is now under military control, the policy established being one of conciliation, with full protection of Cuba's best interests.

END OF SPANISH RULE

CATECHISM.

GEOGRAPHICAL.

[For islands, keys, archipelagos, capes, points, and peninsulas, canals, straits and gulfs of Cuba in detail, see text following the Catechism of Cuba.]

Where is Cuba ?

It is the western-most and largest of the four islands known as the Great Antilles. It lies between $19^{\circ} 48' 30''$ (Cape de la Cruz) and $23^{\circ} 13''$ (Cape Hicacos), north latitude, and $76^{\circ} 32'$ (Cape Maisi), and $87^{\circ} 49'$ (Cape Antonio), west longitude.

LOCALITY

What name was given to Cuba by Columbus ?

Juana, in honor of the heir to the Spanish throne.

What is the formation of the Great Antilles, taken collectively ?

They consist of a disconnected chain of mountains (the Antillean system), protruding above the sea, and having an east-west trend, transverse to that of the axial continental Cordilleres.

Why does Cuba rank among the foremost communities of the world ?

Because of its productive soil, mineral wealth, and climatic conditions.

What important maritime gateways are commanded by Cuba ?

The Straits of Florida, leading from the Atlantic Ocean into the Gulf of Mexico ; the Windward Passage, leading from the Atlantic into the Caribbean Sea, and the Yucatan Channel, connecting the Caribbean Sea and the Gulf. The first and last of these three gateways completely command the Gulf of Mexico.

MARITIME
ADVANTAGES**What is the general aspect of Cuba from the sea ?**

The island, as a whole, stands well above the sea, and, from the water, presents a rugged appearance.

What does the outline of Cuba resemble ?

The Spaniards declare it to be, in shape, like a bird's tongue. It also resembles a great hammer-headed shark, the head of which forms the straight south coast of the east end of the island, while the body extends to the westward in a sinuous curve.

What is the nature of the Cuban coast ?

It is surrounded by numerous islands and reefs, which render the approach both difficult and danger-

NATURE OF
THE COAST

ous to those not acquainted with the proper channels. On all sides, except the south-central, the land rises abruptly, except where indented by pouch-like harbors, and stands above the sea as if the waters of the latter were rapidly planing away what had once been a more extensive land.

**COAST-LAND
CHARACTER-
ISTICS**

What is the nature of the land near the coast line?

A great number of the districts are swampy, and in them yellow fever prevails during the unhealthy seasons.

What is the configuration of Cuba?

About one-fourth of the total area is mountainous, three-fifths are rolling plain, valleys, and gentle arable slopes, and the remainder is swampy.

Through what meridians does Cuba pass?

The longer axis of the island extends from the 74th to the 85th meridian.

Of what islands other than the mainland does Cuba consist?

**ISLANDS AND
ISLETS**

570 cays (coast reefs or sandy islets) adjacent to the north coast, and 730 to the south, also the Isle of Pines, a large and important dependency, almost directly south of Havana province.

What other places of importance are in close proximity to Cuba?

The southern seaboard of the United States, the coast of Mexico, the Bahamas, Haiti, Jamaica, Central America, the Isthmus, and the coast of South America.

Was advantage taken of this fact by the recent possessors of Cuba?

No; trade and communication with adjacent regions, other than Mexico, was neither cultivated nor encouraged.

What is the nature of the soil and surface in the interior of Cuba?

**SOIL AND
SURFACE**

It has not been sufficiently surveyed as yet to permit the preparation of accurate data. The Spanish authorities at various times authorized surveys by commissions. Reports submitted show that insurmountable obstacles were met with, hence inquiries were abandoned in every case.

Of what nature were these obstacles?

Lack of habitation, impenetrability of forests, insurmountability of the Cordilleras, and scarcity of means and time.

How far did their observations extend?

To the 70th meridian only, working eastward.

Is it probable that great discoveries will be made east of the 70th meridian?

Scientists believe that portion of the island to be valuable and interesting.

**LOCALITY OF
RANGES**

Which are the most mountainous parts of the island?

Its extremities and its central parts.

Of what are the lowlands—of eastern Cuba particularly—composed?

Largely of fossils of sea matter from prehistoric times, extremely rich in lime and phosphates.

Are there many prairies and plains in Cuba?

Yes; those most noted for their extent are found on the southern coast, from Pinar del Rio towards Güines, and in the territory between Cárdenas and the jurisdictions of Holguin and Bayamo inclusive.

Is the natural drainage of Cuba abundant?

Yes, varying in character in different parts of the island.

Are there any lagoons in Cuba?

Yes, there are many on the north side of the island.

**LAGOONS
AND SWAMPS**

Is there any yield of value from these lagoons?

A considerable quantity of salt is obtained from them.

What results ensue from the low Cuban shore on the south-central coast?

Floods and inundations are frequent.

Which are the most remarkable swamps in the island?

Majagüillal, at the east of Cárdenas (whence has been opened a canal for drainage); Zapata, the most notable of the island, at the south of Matanzas; Yaguaramás, at the east of Cienfuegos; the Buey swamp at the south of the mouth of the Cauto, and, in the island of Pines, Siguanéa, which occupies the southern half of that island.

Has Cuba yet undergone accurate trigonometrical survey?

No.

**SURVEY OF
THE ISLAND**

How are the different divisions of Cuba distinguished locally?

As the Vuelta Abajo, or portion extending from the meridian of Havana to the western extremity of the island; the Vuelta Arriba, from the meridian of

Havana towards the east as far as Cienfuegos; Las Cinco Villas, from the meridian of Cienfuegos to that of Santo Espíritu; and Tierra Adentro, from that of Santo Espíritu to Holguin and the extreme east of the island.

PROVINCES **What is the nature of the surface in the province of Pinar del Rio?**

It is centrally mountainous, with fertile coastward slopes.

What are the characteristics of Matanzas and Havana provinces?

They are vast stretches of level, cultivated plains, with only a few hills of relief.

What are the surface characteristics of Puerto Principe and Santa Clara?

They are broken regions of low mountain relief, diversified by expansive valleys.

What is the character of the surface in Santiago de Cuba province?

It is predominantly a mountainous region of high relief, especially along the coasts, with many inferior valleys.

[For further details concerning provinces of Cuba, see text following this Catechism of Cuba.]

In which of the provinces are the valleys widest and most fertile?

VALLEYS

In the more rugged eastern provinces. They are numerous also in the provinces of Santa Clara and Puerto Principe. The most extensive of the fertile valleys is that of the Rio Cauto, in the province of Santiago de Cuba.

What are the most prominent characteristics of the Rio Cauto valley?

It lies in a protected position between rugged eminences on the north and south, is threaded by a navigable river, is densely populated, and has been a great stronghold of the insurgent forces during the last rebellion against Spanish rule.

[For further details concerning valleys of Cuba, see text following this Catechism of Cuba.]

What is a conspicuous feature concerning Cuba and the Virgin Islands?

**A CON-
SPICUOUS
FEATURE**

They constitute a distinct geographic province—distinct in relief and geologic formation—from the other West India islands, and the adjacent mainlands.

What special geographic advantage does Cuba possess?

It commands the commerce of the entire American Mediterranean.

Where does Cuba lay with reference to the Gulf of Mexico and the Caribbean Sea?

It separates them.

What city of the United States lies to the north of Cape Maysí?

New York, N. Y.

What city of the United States lies to the north of Cape San Antonio?

Cincinnati, Ohio.

What is the area of Cuba, including keys and small islands?

**DIMENSIONS
OF THE
ISLAND**

118,833 square miles, or a little more than one-fifth of the area of France.

What is the area of the main island of Cuba?

It is estimated at from 40,000 to 43,000 square miles.

With what State does Cuba agree, approximately, in point of area?

Pennsylvania.

What is the length of the island from east to west?

The length of the main island, following an axial line drawn through its center from Cape Maysí on the east to Cape San Antonio on the west, is 730 miles.

What is the area of the Isle of Pines?

**ISLE OF PINES
AND ISLETS**

1,214 square miles (estimated).

What is the aggregate area of the 1,300 cays near the main islands?

1,350 square miles (estimated).

What is the length of the coast line of Cuba?

Without its meanderings, nearly 2,200 miles.

What is the width of the island?

It varies from 90 miles in the east to less than 20 miles in the longitude of Havana.

What is the distance between Cape San Antonio and Yucatan, Mexico?

130 miles.

What is the distance between Havana and Matanzas?

84 miles.

What is the distance between Havana and Cárdenas?

145 miles.

What is the distance between Key West and the north coast of Cuba?

A trifle less than 96½ miles.

DISTANCES

What other islands can be seen from the eastern end of Cuba ?

Haiti and Jamaica, distant 54 and 85 miles, respectively.

CLIMATE.

Is the climate of Cuba considered healthy ?

CLIMATE

It is much more salubrious than is generally supposed by strangers. The winter months are delightful—in fact, ideal—while the summer months are more endurable than in most of the States of the Union.

During how many months in each year is the climate unhealthy ?

Six months, from May to October.

When are the extremes of heat and cold most keenly felt ?

August is the warmest month; January the coldest.

Which are the hottest hours of the day ?

From 10 to 12 o'clock; after noon a refreshing breeze sets in from the sea.

Does the thermometer ever fall to freezing point ?

TEMPER- ATURE

Occasionally, in the interior, at elevations over 300 feet above the sea. In these localities hoar frost is not uncommon, and during north winds ice may form.

Has snow ever fallen in Cuba ?

Once only, in 1856.

What is the mean temperature of the year at Havana ?

On a mean of seven years, 77°, except in the interior of Cuba, at elevations of over 300 feet.

What is the mean temperature at Havana in July and August (the warmest months) ?

82° Fahr., fluctuating between a maximum of 88° and a minimum of 76°.

What is the thermometrical average during December and January ?

72°, the maximum being 78°, the minimum 58°.

What is the average temperature in Santiago de Cuba ?

80°. That of the hottest month is 84°, and that of the coldest 73°.

What is the average rain-fall in Cuba ?

RAINFALL

About 50 inches.

Does rain fall during all seasons of the year ?

Yes; there is no season wholly without rain.

How is the rainy season divided ?

Rarely are there more than twenty rainy days in any one month, and the average is from eight to ten. The rainfall is general in the afternoon, and on an average there are only seventeen days in the year in which it rains in both forenoon and afternoon.

What is the average number of rainy days each year ?

One hundred and two.

**RAINY
SEASON**

Are the rains general from May to October ?

Yes, throughout the island. The period from May to October is known as the rainy season. As a rule, the rains, brought by the trade winds, are heavier and more frequent on the slopes of the eastern end of the island.

How does the rain-fall compare with that of the Eastern States (U. S.) ?

It is no greater.

What is the annual rain-fall at Havana ?

Forty inches, of which twenty-eight inches fall in the wet season.

With what p. c. of moisture is the Havana atmosphere usually charged ?

Eighty-five per cent., which, under the tropical sun, largely induces vegetation.

HUMIDITY

What is the prevailing wind in Cuba ?

The easterly trade breeze. From November to February cool north winds, known as "northers," rarely lasting more than forty-eight hours, are felt in the western portion of the island. These winds produce a seasonal change.

Are hurricanes ever experienced in Cuba ?

The whole island is more or less subject to hurricanes, often of great ferocity. The hurricane of 1846 leveled nearly 2,000 houses in Havana, and sank or wrecked over 300 vessels. In 1896, the banana plantations of the east were similarly destroyed. Heavy storms are frequent on the south coast.

HURRICANES

Are there any indigenous diseases in Cuba ?

No.

Where does yellow fever appear, in Cuba, and is its appearance periodical?

In the coast lands and seaports it breaks out with renewed virulence regularly with the wet season. It occurs occasionally in the interior of the island.

Is fever and ague known among Cuban diseases?

DISEASES

Yes; it prevails on the coasts during the unhealthy season.

What is the real cause of much unhealthiness in Cuba?

Neglect of sanitary measures. While it is true that sickness follows the seasons, the former would be greatly allayed—almost abated—if public hygiene received proper official consideration and individual attention.

What is the proportion of deaths from consumption compared with those from yellow fever?

Deaths from consumption are five times as great as those of yellow fever. Even then, the former disease is not nearly as common in Cuba as it is in the U. S.

What is the percentage of deaths among yellow fever patients?

Less than 8 per cent.

Does leprosy prevail in Cuba?

Yes; more so than in the Sandwich islands; but there is no danger to white persons who are cleanly in their habits.

What are the virtues of green coconut milk?

It aids in cases of yellow fever, kidney and kindred diseases.

**REMEDIES
AND PRE-
VENTIVES**

What remedies should be readily available in case of yellow fever?

Citrate of Magnesia, castor oil, lime juice, and quinine, the last named being used cautiously, to prevent deafness from its effects.

What should be borne in mind by visitors and intending residents?

That their health and comfort depend to a great extent on absolute cleanliness and moderation.

MOUNTAINS.

[For mountains of Cuba in detail see text following this Catechism of Cuba.]

MOUNTAINS Which is the most extensive mountain range in Cuba?

The Sierra Maestra, of which the Sierra de Carcamas is an extension, stretching westward to the plain of Principe.

Which are the highest peaks in this range ?

Pico de Tärquino, rising to a height of 7,670 feet; Gran Piedra, 5,400 feet; Yunque and the Pico Ojo del Toro, each 3,600 feet in elevation.

Where are these two eminences situated ?

In the Sierra Maestra, between Capes de Cruz and Maysí.

Which is the highest peak of the central system ?

Potrerrillo, 3,050 feet.

Do volcanoes exist in Cuba ?

Not in activity, but the pumice stone, pyrites, and other substances found in some of the mountains, such as Cayólbana, Ojo del Toro, Tärquino and others, indicate that they are extinct volcanoes.

**VOLCANOES
AND EARTH-
QUAKES****Is the island subject to earthquakes ?**

They are seldom felt in the western districts, but are frequent in the eastern.

Does it contain caverns ?

Yes, many; and some of them are very curious and admirable, such as those of Resolladero Guacamaya in Guainguainco, María Belén in the Sierra of Anape, the magnificent cavern of Bellamar in Matanzas, and others.

What is the acreage of primeval forests in Cuba ?

13,000,000 acres (estimated).

RIVERS.

[For rivers and lakes of Cuba in detail see text at end of this Catechism of Cuba.]

How many navigable and other rivers does Cuba possess ?

There are 150 ; one only, the Rio Cauto, is navigable.

RIVERS**Which is the longest river on the island ?**

The Rio Cauto, 273 miles in length.

Through what portions of its length is the Rio Cauto navigable ?

For river craft, 75 miles, but small boats can traverse about two-thirds of the distance. The mouth of the Rio Cauto has been obstructed by bars.

What is the source and course of the Rio Cauto ?

It rises in the Sierra Maestra and runs through the valley of Bayamo.

Which are the most notable of the Cuban cascades?

CASCADES

That of the river Manantiales (affluent of the Bayete, in the Vuelta Abajo), 30 rods in height; that of Siguaan a (affluent of the Arimao), 130 rods; that of the river Ay, 60 rods; that of Taguayb n (affluent of the Mea), 100 rods; that of the river Minas (affluent of the Miel), close to Baracoa; and that of the river Indio, 120 rods.

HARBORS AND PORTS.

[For bays, ports, bights, creeks, and harbors of Cuba in detail see text following this Catechism of Cuba.]

Is the harbor accommodation of Cuba good?

HARBORS

Yes; probably no country in the world is so blessed with harbors. Not only are they very numerous, but many of them are excellent, affording convenient outlets for the products of the island, and easy access for oceanic and coastal transportation.

How many good harbors are there in Cuba?

Forty.

Where are the chief harbors?

On the north coast, Havana, Matanzas, Nuevitas, Gibara, Nipe, and Baracoa. On the south coast, Guantanamo, Santiago de Cuba, Manzanillo, Trinidad, and Cienfuegos, the last named being considered one of the finest harbors in the world.

What is the usual shape of Cuban harbors?

**SHAPE AND
LOCALITY**

They are nearly all pouch-shaped inlets indenting the coast, with narrow outlets pointed by elevated reef rock and capable of accommodating large numbers of vessels.

Are they conveniently situated?

So admirably have they been distributed by nature, in different portions of the island, that the trade of Cuba may be said literally to pass out of a hundred gates.

Is Havana Harbor considered safe by mariners?

It is one of the safest harbors in the world.

Are large vessels able to use the harbor of Matanzas freely?

No, as large quantities of sediment have remained undredged, rendering the water so shallow that large steamers are obliged to load in the roadstead.

**PORTS OF
ENTRY**

How many ports of entry are there in Cuba?

54, of which 15 are open to commerce.

Which of the ports are used by American and Spanish steamers ?

All of the principal ports.

Are there any considerable ports of entry to the west of Havana ?

Three: Mariel, Cabanas, and Bahia Honda. They are similar to Havana in formation, but are only of secondary importance.

What port lies directly south from Havana ?

Batabano, an entrepot for Havana. Here also the coastal cable from Santiago touches, and from this point radiate various lines of steamers along the coast and to the Isle of Pines.

**COAST
NAVIGATION**

Is the island systematically circumnavigated for purposes of commerce ?

Yes, by coastal steamers, which touch at the minor ports, also used by tramp and sailing vessels in search of cargoes.

Where are the starting points for steamers on the north and south ?

Along the north coast, Havana; along the south coast Batabano, the southern entrepot of Havana.

What is the area and depth of Havana Bay ?

Area, 23 square miles; depth, from 37 to 60 feet, the usual depth being from 50 to 60 feet.

Are there many lighthouses in Cuba and vicinity ?

Yes; on the W., Roncale, on the cape of San Antonio, and others; on the N., O'Donnell in Morro Havana, Matanzas, and Cayo Diana in Cárdenas; Concha in Maysí, and seven others; on the E., Maysí; on the S., Vargas in Cape Cruz, Villanueva in Cienfuegos, and others; on the Isle of Pines, Cocodrillos.

**LIGHT-
HOUSES**

HIGHWAYS AND ROADS.

[For roads of Cuba in detail, see text following this Catechism of Cuba.]

Are the roads good in Cuba ?

Only near towns, beyond that they are very poor, and mule carts and horseback are the agents of transportation to the nearest sea port.

Where are the best roads located ?

Along a route leading from Havana into Pinar del Rio, and from a few interior cities to their entrepots.

ROADS

**POOR
ROADS**

What is the official title of these roads, and when were they made?

They are classed as Camino del Rey (the King's highway), and were established in the early years of Spanish rule.

What route is taken by the "Central Road" or highway to Cuba?

It runs between Havana and Santiago, passing by Luyanó, Jaruco, Limonar, Santa Clara, Esperanza, Bayamo, and others. There are other central highways.

Is this road worthy of its impressive name?

No; it is a mass of dust or mud, and only exists at infrequent intervals in the vicinity of larger towns.

Are existing maps reliable in showing good roads?

No; roads are often marked, but that is no proof of their actual existence.

Which means of transportation is most in vogue when available?

By water.

How do the roads of Pinar del Rio, Havana, and portions of Matanzas compare with those of other parts of the island?

They are better.

How are goods transported in the interior of the island, outside of the railway lines?

By means of ox-carts and pack-mules.

How many services of cars, or diligences, does the island maintain?

One from Havana to Caimito; another from Havana to San José de las Lapas, and one from Cojunar by the coast of La Cabana.

**ROAD CON-
VEYANCES**

What is the name of the national carriage or conveyance in Cuba?

The Volante. No other is used in the country.

How is the Volante constructed?

It is a two-seated carriage, slung low down by leather straps from the axle of two large wheels, and has shafts 15 feet long. The horse in the shaft is lead by a postilion, whose horse is also harnessed to the carriage with traces.

TRANSPORTATION.

[For additional details concerning transportation to and from the seaports of Cuba, by the various means available, also communications inland and otherwise, including railroad, telegraph, telephone, and cable service, see transportation notes following this Catechism and text on Cuba.]

How many railroads are there in Cuba, and what length of line ?

Ten, averaging upward of 1,000 miles of main line, which includes principally the united system of Havana, extending through the tobacco and sugar districts of the west and center.

RAILROADS

When was the first railroad line opened ?

In 1837, between Havana and Guanajay.

Since that time, what lines have been established ?

South from Cienfuegos to Santa Clara; east from Puerto Principe to Nuevitas; from Cárdenas and Concha to Aguada and Esperanza (Encrucijada); from Casilda to Fernandez.

Which of the Cuban cities can be reached by rail from Havana ?

Guanajay, Batabanó, Matanzas, Cárdenas, Cienfuegos, Santa Clara, Pinar del Rio, and Sagua la Grande.

CONNECTIONS BY RAIL

What important points are connected with Havana by rail ?

Matanzas, Pinar del Rio, Batabanó, Cienfuegos, Sagua, and Santa Clara, the last named being the present terminal point, 150 miles from Havana.

Are there any short local lines in this region ?

Several extend interiorward from Nuevitas, Remedios, and Santiago.

Is the south coast of Cuba easy of access from Havana by rail ?

Yes; the line terminates at Batabano, a distance of 25 miles from the capital.

SOUTH COAST CONNECTIONS

Can the most important sugar estates be reached by railroad ?

Yes, there are private branch lines running to them.

Of what description are the railroad carriages in Cuba ?

Of the American type, fitted, as well as the locomotive, with the Westinghouse automatic brake.

Of what material are the rails in the Cuban railway system ?

Of steel, weighing 60 lbs. per yard.

**RAILROAD
BUSINESS**

How many passengers were carried by rail in Cuba in 1894?

Over 750,000.

POPULATION.

What is the proportion of population, according to sex, color, and nativity?

In 1887, there were 882,600 men, and 749,087 women. The latest statistics show a total population of 1,762,000, 1,228,000 of whom are white; 490,000 are negroes and mulattoes, and 44,000 Chinese.

Into how many classes are the inhabitants of Cuba divided?

(1) The native Spaniards; (2) the creoles, who are mostly planters, farmers, or lawyers; (3) free mulattoes and free negroes in about equal parts.

POPULATION

What is a creole?

A person born in foreign lands of European types, but also of colored types. The descendants of the French, Spanish, and Portuguese in the American colonies call themselves creoles. In the Cuban sense, a creole is a person of pure white blood born in Cuba of Spanish descent.

What is the density of population per square mile in each province?

Havana, 109.93; Matanzas, 79.50; Santa Clara, 39.90; Pinar del Rio, 39.19; Santiago de Cuba, 20.13; Puerto Principe, 5.46.

What is the population of Cárdenas?

23,354, of whom 15,580 are white.

When were emancipados (partially freed negroes) made fully free?

January 1, 1854.

**ABOLITION
OF SLAVERY**

When was slavery totally abolished in Cuba?

October 7, 1886.

How do the manners and customs of the Cubans compare with those of Europeans?

They are similar, except that the Cubans are very conservative, and do not readily assimilate cosmopolitan ideas.

Are there many Freemasons in Cuba?

Yes; in proportion to the total population there are more than in any other country in the world.

By whom were positions of official and clerical prominence filled under the late administration?

Almost exclusively by Spaniards.

Of what nationality are the landowners in Cuba?

Cubans, English, Americans, Germans, French, and a few Spaniards.

**NATIONAL-
ITY OF PRO-
PRIETORS**

To what nations do the railroad owners belong?

These roads are run by Spanish, English, American, and French capital, under Spanish and English management.

Of what nationality are the majority of merchants?

Spaniards, some Cubans, and an occasional Englishman, German, American, Dutchman, and Chinaman.

Are the engineers of the large sugar estates foreigners?

Yes; mostly Germans, Americans, English, and French. The Cuban, as well as the Spaniard, lacks the natural inventive ability.

Has vagrancy been suppressed, hitherto, in Cuba?

No; on the contrary, documents were furnished by the municipal authorities authorizing certain persons to become professional beggars.

VAGRANCY

To what is this state of affairs attributable?

The lack of charitable institutions.

Are the Spanish official maps of Cuba accurate?

No; the Spaniard is not trustworthy in this connection. Investigators have often been misled by errors.

From what race is the labor-market largely supplied?

The black race throughout the island. They are Cuban by birth and sentiment.

**EMPLOY-
MENT OF
LABOR**

Is any white labor employed?

Yes; in the vicinity of the cities, and the workers are, as a rule, Spanish peasants.

Of what nationality are the seafaring people of the Cuban coast?

Generally Spanish.

How are the Chinese employed?

Many are on plantations. This class of laborers is decreasing, as Chinese importation is forbidden.

Who are the most valuable laborers on the island?

Former Spanish soldiers; they are conscientious and faithful.

**CUBAN
CHARAC-
TERISTICS**

What is a leading characteristic of the Cuban of mixed blood?

He is very independent, and would rather cultivate a small patch of land for himself, earning little, than labor for wages, with a larger financial gain.

What is the Galician and Catalan peasantry noted for?

For their industry.

What is the present attitude of white laborers as to migration?

They prefer to remain near the towns until protection to life is assured.

Of what standard are the educational facilities?

**EDUCA-
TIONAL
FACILITIES**

Very low; in 1893 a representative of the British government reported only 843 public schools. This averages one school to each 1,800 inhabitants.

What school facilities were reported at Havana in 1895?

910 public schools, of which 461 were elementary, the latter in smaller towns; while 766 private institutions were reported, making a total of 1,676.

Are there many academic institutions in Cuba?

There is one in each province for boys, the ordinary course of study being five years, which time is compulsory before entering the university.

Are there any public libraries in Cuba?

No; there are none.

ILLITERACY **What is the present percentage of illiteracy?**

76 per cent. unable to read or write.

How do the better classes educate their children?

They are obliged to send them abroad.

CITIES.

[For details other than those given below concerning cities and towns of Cuba, see text following this Catechism of Cuba.]

What are the largest cities of Cuba?

Havana, population 250,000; and Matanzas, 60,000.

Which city of Cuba is recognized as the political capital of the island?

Havana, which also ranks as the principal city with reference to population, wealth, commerce, and other important features.

**CAPITAL OF
THE ISLAND**

When was Havana founded, and by whom?

In 1515, by Diego Velasquez.

What is the proper name of the city of Havana?

San Cristóbal de la Habana.

On what site did the city formerly stand?

For four years it was located on the south coast, in the neighborhood of the present harbor of Batabanó; then the chief city was removed to the site it now occupies.

How is Havana situated?

Mainly on the west and south sides of a capacious harbor, and surrounded by eminences rising to one hundred and fifty feet.

**FACTS CON-
CERNING
HAVANA**

When was Havana first fortified?

In 1663, when the Spaniards found it necessary to protect the city from piratical attacks, which had been continued during more than a hundred years by the "Filibusters."

What are the most notable objects in Havana?

The wharfs, fortifications, hospitals, university, botanical garden, government palaces, several churches, including the cathedral, and several statues, including those of Columbus, Fernando VII., Isabella III., etc.

Is there a system of waterworks at Havana?

**HAVANA
WATER-
WORKS**

Yes; it was installed in 1895 by New York engineers.

Are municipal improvements now in progress at Havana?

Yes, under the supervision of U. S. army officers. The same may be said of all other large Cuban cities.

From which of the rivers is the Havana water supply obtained?

The Rio Armendaris, which nearly encircles Havana on the south.

Is there a proper sewerage system in the city?

No; plans, having this end in view, were submitted by the engineers, who undertook to install the system of waterworks now in use, but the matter

remained in abeyance until very recently. Active steps are now in progress to purify Havana by means of a modern sewerage system and other methods essential to health.

**RAPID
TRANSIT**

What methods of rapid transit exist in Havana for city service ?

Horse cars and elevated roads. An electric system of car service is now in process of development.

Was Havana a representative Spanish city under the late government ?

Yes, and in this sense it was entirely unrepresentative of the local customs and sentiments of provincial Cuba.

Which is the second city and seaport of western Cuba ?

Matanzas, about 75 miles east of Havana by rail; as the crow flies, the distance between the two cities is 54 miles. It was founded in 1693.

MATANZAS

Is Matanzas a noted commercial center ?

Yes; it is the chief outlet for that part of the sugar region which stretches south and east toward Cárdenas, and which includes the most fertile lands in Cuba.

What other notable facts can be stated concerning Cuban cities ? *

CÁRDENAS, on a spacious bay, sheltered by a long promontory, is one of the principal sugar-exporting places of Cuba, and is connected by rail with Havana, and by regular steamers with all the coast towns. It was founded in 1828.

CIENFUEGOS

CIENFUEGOS, the second seaport in the island, is situated on a magnificent harbor. It is a modern city, settled in 1819 by refugees from Santo Domingo. TRINIDAD, to the east of Cienfuegos, has an excellent roadstead. The city is surrounded by high hills and mountains. It dates from the earlier years of the Spanish occupation, and has frequently been raided by French and English buccaneers.

**PUERTO
PRINCIPE**

SANTA CLARA is largely the home of cultured creoles. CAMAGUEY, officially known as Puerto Principe, is the chief interior city of Cuba, and claims to be the most creole of Cuban towns. It stands on a plain about midway between the two coasts, and is connected by rail with Nuevitas to the northeast.

* See also geographical note following this Catechism under the heading "Provinces and Cities."

BARACOA, the easternmost port of the north coast, is the oldest continuous settlement of the new world, having been founded by Diego Columbus, son of Christopher, in 1511. It was the scene of Maceo's landing on Feb. 25, 1896, when the insurgent leader started the last revolution. It is an important commercial city, seat of the banana and coconut trade.

SANTIAGO, known to the Cubans as Saint Jago de Cuba, ranks second to Havana in strategic and political importance. It is the capital of the eastern department, as well as its most flourishing seaport. Its entrance is dotted by many islands. This entrance at the narrowest part is only 180 yards wide, but it gives access to a magnificent basin, with many indentations, large enough to accommodate all the shipping of the island.

Several lines of railroad run from the city to the iron mines, sixteen miles east. Santiago is the telegraphic center, whence radiate the submarine postal cables of the island for the western department — Mexico, Jamaica, South America, Haiti, Puerto Rico, and the lesser Antilles.

SANTIAGO

Is there an ample supply of pure water in Cuba?

Yes.

**WATER
SUPPLY**

Has the street railway system been developed outside of Havana?

No; at present there is only a short mule line in the city of Puerto Principe.

What is strikingly characteristic of the names given to stores and taverns?

They resemble those of the southern Roman Catholic countries of Europe.

Are elevators in use in Cuban cities?

There are only two, in Havana, and they are in hotels. Buildings are usually low.

How many post-offices were there in Cuba in 1894?

There were 339.

**POSTAL
SERVICE**

How many letters were sent through the Cuban post-offices during 1894?

14,392,094, of which 12,391,883 were in land and the remainder foreign.

Are any measures in progress for extension of the postal service?

Yes; experienced U. S. officials are now working out a practical system on the basis of that now in use throughout the United States.

AGRICULTURE.

What percentage of the land in Cuba is under cultivation?

About 10 per cent.

What are the principal agricultural products of Cuba?

Sugar-cane, tobacco, coffee, bananas, corn, oranges, and pineapples, in the order named.

In what part of Cuba is the growing of sugar-cane the leading industry?

**SUGAR-CANE
INDUSTRY**

The whole of the vast central plain, and much of the region from the Cauto westward to Pinar del Rio, except where broken by hills, is one continuous field of cane.

What is a fair yield of cane in these districts, and its value?

In 1892-93, it yielded 1,054,214 tons, valued at \$80,000,000.

Which agricultural industry takes second rank in Cuba?

Tobacco.

CEREALS

Is the land of Cuba suited to the cultivation of cereals?

No, generally not.

Are corn, wheat, and oats grown in Cuba?

Indian corn is raised for local use as food for the inhabitants, also for forage purposes. Wheat and oats are not cultivated.

Is rice extensively cultivated?

Yes; but the product of the island is insufficient to meet the demand.

Is cocoa or chocolate produced in Cuba?

Yes; over 4,000,000 lbs. were produced in 1896 in Santiago province; it is a staple article of export to Spain.

What are leading products of Cuba in addition to those mentioned?

Indigo, hemp, mustard, ginger, vanilla, sarsaparilla.

**FRUITS AND
VEGETABLES**

What fruits, vegetables, and cereals are indigenous to the island?

Pineapples, manioc, sweet potatoes, and Indian corn.

Are garden vegetables cultivated in Cuba?

Yes, and they are always in season; but lack the crisp freshness usual to such products.

Is grass plentiful in Cuba?

Yes; rich and nutritious grasses are found throughout the island, affording excellent forage for stock.

In which provinces are the grazing lands richest?

Santa Clara, Puerto Principe, and Santiago.

Are fertilizers essential in cultivation of the lands?

No; the soil is a marvel of richness, and fertilizers are seldom used, unless in the case of tobacco, even tho the same crops be grown on the same land for 100 years, as has happened in some of the old sugar-cane fields.

Does bee culture receive attention in Cuba?

Yes; the cultivation of bees is extensive. The product of honey and of bees-wax is therefore large, and an important source of revenue.

**BEE
CULTURE**

Do poultry flourish on the island?

Yes, everywhere. They abound in all markets.

What industry, under favorable conditions, is likely to become preeminent?

Fruit-growing.

How many farms, ranches, and plantations in Cuba?

More than 100,000, valued at \$30,000,000. Many of the farms contain less than 100 acres.

**FARMS AND
PLANTA-
TIONS**

SUGAR.

What are the estimated capabilities of sugar-producing lands in Cuba?

If entirely devoted to that industry, the whole Western Hemisphere could be supplied.

What is the nature of the Cuban sugar lands?

They are all upland soils, quite different from the lowlands of Louisiana, and excel in fertility those of all the other West Indies, the cane requiring to be planted only once in seven years, instead of every year, as in Antigua.

**SUGAR
LANDS**

In what part of the island are sugar-cane plantations found?

In the higher agricultural district, on the north side, in the region of the red earth, known as the Vuelta Arriba.

How are the sugar estates equipped, with regard to machinery?

Up to the outbreak of the last revolution the mechanical equipment was the finest and most modern in the world. Altho this industry during the past three years has been almost destroyed, a rapid revival is anticipated under the conditions now existing.

**SUGAR
ESTATE
EQUIPMENT**

What is the sugar product per annum under favorable conditions?

More than 1,000,000 tons.

What was the total product of sugar during the fiscal year 1896-97?

212,051 tons, being 13,170 tons less than the previous year.

What is the average export of sugar under favorable conditions?

1,024,000 tons, of which 966,000 tons go to the United States.

When was the sugar-cane industry established in Cuba?

In 1523, when King Philip I. made a loan of 4,000 piasters to each person engaging in its production.

To what extent is molasses manufactured in Cuba?

In 1890 the product was 110,000 tons.

What is the export of rum from Cuba?

9,308 kegs were shipped in 1893, mostly to Central and South America.

TOBACCO.

How is the tobacco growing area of the island divided?

Into two unequal parts, called La Vuelta de Arriba and La Vuelta de Abajo, the tobacco produced within each area having distinctive qualities.

Where is tobacco grown with greatest success?

It grows well in all parts of the island, but the chief seat of its cultivation is along the southern slopes of the Cordillera de las Organos, in Pinar del Rio, the famous Vuelta Abajo region, which produces the finest leaf in the world.

Is the leaf known as "Havana tobacco" grown near that city?

No, it is frequently from land on the borders of the rivers Hondo, Sico, and Teo, in a mountainous country intersected by little valleys, the slightly sanded soil of which is well adapted for the growth of fine tobacco.

Of what quality is the exported Cuban tobacco?

Poor and medium, as a rule. The best tobacco is hardly ever exported. Cubans, of all classes and

**MOLASSES
AND RUM**

**WHERE
TOBACCO
PROSPERS**

**QUALITY OF
TOBACCO**

ages, and of both sexes, are inveterate smokers, and they insist on using the best leaf grown on the island. Tobacco for home consumption is frequently purchased in advance of the crops. It is estimated that at least 5,000,000 cigars per diem are consumed in Cuba.

**HAVANA-
MADE
CIGARS**

Are all Havana-made cigars of Cuban tobacco?

No; as an illustration, in one year, out of 515,333,000 cigars exported from Havana, only 251,333,000 were made from Cuban leaf, the remainder having been imported from Puerto Rico.

Is the import of Puerto Rican tobacco now permitted in Cuba?

No; the prohibitory order took effect on Jan. 15, 1898. It was issued in consequence of fraud discovered at Havana, whereby cigars made from Puerto Rican tobacco were exported as Cuban product.

How many persons are usually engaged in tobacco cultivation?

About 80,000.

**PUERTO
RICAN
TOBACCO**

What is the estimated average tobacco crop of Cuba?

560,000 bales of 110 lbs., 338,000 bales being exported, and the remainder used in cigar and cigarette manufacture in Havana.

What was the export of tobacco leaf from Cuba in 1896?

16,823,000 lbs.

How many cigarettes were made in Cuba in 1891?

732,000,000.

**CIGARETTES
AND CIGARS**

How many cigars were made in Havana in 1892?

167,000,000.

What was the export of cigars in 1896?

185,914,000.

Are there many cigar factories in Havana?

Yes; a large number, giving employment to thousands of people of both sexes and all ages.

Is coffee cultivated in Cuba?

Yes; to a limited extent. Many trees have been cut down and replaced with sugar-cane, a more profitable product.

COFFEE

COFFEE

Has the coffee industry of Cuba suffered from competing markets?

Yes; the favorite products of Brazil and Java have destroyed the export market for Cuban coffee. Nearly enough is growing, however, to supply the home market.

Which sections are most favorable for the cultivation of coffee?

The mountain sides and hill lands of the east. The quality of coffee grown in these localities equals that of the Jamaican Blue Mountain growth.

What was the product of Coffee in 1896?

Nearly 2,000,000 pounds, nine-tenths being grown in Santiago province.

COTTON

Is cotton an important product of Cuba?

Not at present, altho natural conditions are favorable along the coasts and on the islets.

VEGETABLE KINGDOM.

[For details of the Cuban vegetable kingdom, with Spanish names and English equivalents, see text following this Catechism of Cuba.]

Which are the leading vegetables, plants, and roots?

The sweet and bitter cassava, and the sweet potato. Sweet cassava root is eaten as a vegetable. The root of a bitter cassava is converted into bread, after its poisonous juice has been extracted. The sweet potato, and other farinaceous roots are common. Arrowroot and the lemon tree are also Cuban growths.

[For details of Cuban flowers, with Spanish names and English equivalents, see text following this Catechism of Cuba.]

How many flowering plants are there in Cuba?

According to a botanical catalogue issued, there are 3,350 indigenous flowering plants, besides those introduced by Europeans. The epiphyllist orchid grows in Cuba.

Why is Cuba called the "Pearl of the Antilles?"

From its wealth of flora. Over 3,350 native plants are found, and many others have been introduced from abroad.

FLORA

What characteristic forms are embraced in the flora of the island?

Those of the other West Indies, the southern part of Florida, and the Central American seaboard.

Which forest tree is at once the most stately and the most valuable ?

The palm. The most common species, the *Palma Real*, is found in all parts, but especially in the west.

**PALMS AND
PINES**

How many species of palms are there in Cuba ?

More than thirty, including the royal palm.

In which of the provinces is the pine tree found ?

In Pinar del Rio. It also flourishes on the Isle of Pines. Both districts are named from this tree.

Which are the principal woods found in Cuba ?

Mahogany, cedar, logwood, redwood, ebony, lignum-vitæ, and caiguaran (which is more durable in the ground than iron or steel); granadilla, the cocoa wood (out of which reed instruments are made), and *cedrela odorata*, which is used for cigar boxes and linings of cabinet work.

**COMMERCIAL
WOODS**

Among the indigenous woods of Cuba, which are the most valuable ?

Mahogany and other hard woods, such as the Cuban ebony, cedar, sabiela, and granadilla (used in manufactures, cabinet work, and ship building). There is a considerable export of these woods.

[For further details concerning Cuban trees and woods, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

Is the growth of bananas and plantains an important industry ?

It was, prior to the last insurrection. Since that time the cultivation of this fruit has been interrupted by internal disturbances, but under promising conditions it is bound to flourish again.

FRUITS

What districts have proved most favorable for banana cultivation ?

The vicinity of Nuevitas and Baracoa, at the eastern end of the island.

Which months are considered to be the banana season in Cuba ?

From February to December.

How does the Cuban banana rank among United States imports ?

As the largest and finest received.

BANANAS

What is the average export of bananas, under favorable conditions ?

One ship load per diem, chiefly from Baracoa.

Which are the most esteemed fruits of Cuba?

The pineapple and orange.

ORANGES

Is the growth of oranges in Cuba confined to one province or section?

No; this fruit, of a delicious flavor, grows spontaneously in all parts of the island.

Has any attention been paid to the export of the orange from Cuba?

None whatever.

Where are pineapples grown?

In western Cuba, and on the Isle of Pines.

What is the virtue of the Myrtacee fruit which grows in Cuba?

It is made into pepper of cloves and forms an important article of commerce.

OLIVES

Are olives plentiful in Cuba?

Yes; the variety of specimens is greater than that of any other country,

[For further details of Cuban fruits, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

MINERAL KINGDOM.

[For details concerning Cuban minerals, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

MINERALS

What are the leading mineral resources of Cuba?

Iron ore, asphaltum, manganese, copper, and salt. The copper is abundant and of superior quality.

What other minerals are found in Cuba?

Platina, gold, silver, lead, gypsum, jasper, and marble. Gold is not mined.

Is anything definite known concerning the existence of iron?

It is generally believed that iron exists in various districts, and many parts of the great Cordillera undoubtedly contain rocks of a ferruginous nature. Extensive mining operations—except near Santiago—have not yet been engaged in.

IRON MINES

How many iron mines were there in Cuba at the end of 1891?

There were 138.

How many men are employed in the iron mines?

From 800 to 1,400.

Where are the iron mines now in use and what is their product?

A few miles east of Santiago de Cuba. The Juragua Iron Company, in 1896, mined 350,000 tons. The Daiquiri company also has mines in the vicinity.

What is the combined capital of the Juragua and Daiquiri companies?

Over \$5,000,000.

Of what description is the iron ore found in these mines?

The products of the Santiago mines are mineralogically peculiar, being the result of replacement in limestone. They are mixed brown and red hematite (turgite). The ore is rich, yielding from 66 to 67 per cent. of pure iron. It is very free from sulphur and phosphorus.

IRON ORE

Are the mines owned and operated by natives or foreigners?

They are controlled by an American company. The last insurrection practically brought the work to a standstill for the time being.

What quantity of iron ore is shipped per month to the U. S.?

From 30,000 to 50,000 tons, the largest portion being used at Bethlehem, Steelton, Sparrow's Point, and Pittsburg.

When, and in which province was copper first discovered?

Santa Clara, in 1827.

Where are the mines situated?

On the Sierra Maestra range, twelve miles from Santiago de Cuba.

COPPER

What has been the product of these mines when fully worked?

50 tons per diem.

How many copper mines were there in Cuba at the end of 1891?

There were 53.

Are any gold or silver mines open in Cuba at present?

Silver is mined at this time, but in small quantities.

GOLD AND SILVER

Where were the first silver mines located, and what did they produce?

In Santa Clara; their yield in 1827 was 140 oz. to the ton; but they were soon worked out.

What was the quality of the first silver ore mined in Cuba?

The yield produced 7 oz. of pure silver to the quintal (107¾ lbs.) of ore.

MANGANESE] Where is manganese usually found in Cuba?

In the Sierra Maestra range, on the southern coast from Santiago west to Mazanillo, within a distance of about 100 miles.

How many manganese mines were there in Cuba at the end of 1891?

There were 88.

Is slate found in Cuba?

Yes; the Sierra Maestra, the most important mountain range, is largely formed of slate.

What is the usual quality of slate quarried in Cuba?

It is thick; suitable for floors and pavements. Slate of this kind is quarried near Havana.

Where does asphaltum occur?

ASPHALTUM

In several parts of the island, in the beds of late cretaceous and early eocene age. At Villa Clara occurs an unusually large deposit, which, for forty years, has supplied the material for making the illuminating gas of the city.

To whom do the asphaltum mines belong?

To American investors, who bought them during the year preceding the last revolution. So far, their investment has brought no returns, owing to the unsettled condition of the country.

Where are marbles and jaspers found, and of what description are they?

In many parts of the island. They are of various colors, and susceptible of a high polish. The Isle of Pines contains these stones in large quantities.

Is the lodestone found in Cuba?

Yes; in various parts.

Of what description and quality is Cuban coal?

COAL

It is highly bituminous, affording a strong heat and leaving very little solid residue in the form of ashes or cinders. This bituminous coal is abundant. In some places it resembles asphaltum. Near the coast it is often found in a semi-liquid state, like petroleum or naphtha.

Are mineral oils found in Cuba?

Yes.

Are there salt pits and works in Cuba ?

There are a few natural ones, unworked. There are also salt works at the bight of Majaná. The works at Chocó have yielded nearly 4,000 arrobes (of 25 lbs.) of salt annually. There are also works at Punta del Padre, and at the ports of Malagneta, Padre, and Nipé, and in the Bay of Guantanamo.

SALT**Where is salt chiefly found ?**

In the cays, adjacent to the north coast. It is of great purity.

Are there mineral springs in Cuba ?

The island abounds in them, but no provision has yet been made for their proper utilization for bathing and drinking purposes.

Which are the most celebrated Cuban medicinal waters ?

Those of San Diego, Pueblo Nuevo, Mesa, Copey, Guanabacoa, Jabaco (near Macurijes), Bija, and Cedrón (7 leagues from Aserradero, and 4 leagues from Santiago). In the Island of Pines, the waters of Santa Fé.

**MINERAL
WATERS****ANIMAL KINGDOM.**

For details concerning Cuban animals, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

Which are the most valuable of the domestic animals in Cuba ?

The ox, horse, and pig. They form a large proportion of the animal wealth of the island.

Is Cuba favorable for the breeding of horses ?

Yes, they are bred in all parts of the island.

ANIMALS**What are the characteristics of the Cuban horse ?**

It is a stout pony, descended from Andalusian stock, with the build of a cob and a peculiar pacing gait, which renders it an exceptional easy riding animal.

Do goats and sheep flourish in Cuba ?

No. The wool of Cuban sheep changes into a stiff hair, like that of the goat.

What are the totals of horses, mules, cattle, sheep, and pigs in Cuba ?

Horses and mules, 584,725; cattle, 2,485,766; sheep, 78,494; pigs, 570,194. (1892.)

What wild animals abound in the woods of Cuba ?

Wild dogs and cats, sprung from domesticated animals and differing from them only in habits and size. They are very destructive to poultry and cattle.

**HORSES,
MULES, ETC.**

What quadruped is peculiar to Cuba ?

The Jutia or Hutia. It is shaped like a rat, and is from twelve to eighteen inches in length, exclusive of the tail. It is of a clear black color. It inhabits the hollows and clefts of trees, feeding on leaves and fruits. Its flesh is insipid, but is sometimes eaten.

Where are deer found in Cuba ?

DEER

In swampy districts. They are supposed to have been introduced from the American continent.

What is a conspicuous feature among birds indigenous to Cuba ?

The beauty of their plumage. These birds are very numerous, including upwards of two hundred species.

BIRDS

Are there many birds of prey in Cuba ?

Very few. Among well-known birds in Cuba the vulture and turkey-buzzard are protected by law and custom, because of their services in the removal of offal.

[For details concerning Cuban birds, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

Among Cuban insects, which are the most conspicuous ?

The bee and the phosphorescent fly. These latter are very numerous, and much used among the poorer inhabitants of the island. Fifteen or twenty of them confined in a calabash shell, pierced with holes, frequently serve during the night as a kind of lantern.

NOXIOUS INSECTS

Are there any noxious insects in Cuba ?

Yes, including the Chigoe or jiggers, a species of ant called Vivajagua, the mosquito, the sand-fly, scorpion (less poisonous than that of Europe), and spiders, whose bite is malignant enough to produce fever.

[For details concerning Cuban insects, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

Are snakes numerous in Cuba ?

Not very. The largest, called the Maja, is from 12 to 14 feet in length, and from 18 to 20 inches in circumference; but it is harmless. A venomous snake is the Juba, which is about six feet long.

SNAKES AND REPTILES

Do reptiles abound in Cuba ?

The reefs and shallows, and the sandy portions of the beach, abound in turtle; and the crocodile, cayman, and iguana are common.

[For details concerning Cuban reptiles, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

Is there a plentiful supply of fish in Cuba?

Yes; the rivers, bays, and inlets are well supplied. Oysters and other shell-fish are numerous, but of inferior quality.

FISH

Are crabs common in Cuban waters?

Large numbers of land-crabs are frequently seen; they cross the island from north to south every spring, when the rains commence.

For details concerning Cuban fish, giving Spanish names and English equivalents, see text following this Catechism of Cuba.]

FINANCE.

[For details concerning coins, weights, and measures now known in Cuba, see text following this Catechism of Cuba.]

What were the total receipts of Cuba for the fiscal year 1893-94?

24,440,759 pesos (of 97 cents).

RECEIPTS
AND EX-

What were the total expenditures of Cuba for the fiscal year 1893-94?

25,984,239 pesos (of 97 cents).

PENDITURES

What was the estimated debt of Cuba on July 1, 1895?

\$295,807,264.

COMMERCE AND SHIPPING.

[For details concerning Cuban shipping regulations now in force, see official statements following this Catechism and text on Cuba.]

What is the value of foreign trade with Havana?

\$50,000,000 per annum.

FOREIGN
TRADE

How many vessels entered the most important harbors of Cuba during 1894?

3,181, with a tonnage of 3,538,539.

What are the principal imports of Cuba?

Rice, jerked beef, and flour.

What was the value of imports of Cuba during the year ending April, 1896?

\$66,166,754.

Which are the chief imports from England, United States, and Germany?

Foods, alcohol, tin, and metal wares, and boards.

What is the total value of Cuban imports from Great Britain?

13,051,384 Pesos (of 97 cents), (1892).

What is the total value of Cuban imports from the United States?

16,245,880 Pesos (of 97 cents), (1892).

IMPORTS
AND
EXPORTS

What is the value of domestic exports from the United States to Cuba?

\$7,599,757 (1897).

What is the value of foreign exports from the United States to Cuba?

\$660,019 (1897).

What is the total value of Cuban imports from Spain?

18,553,307 Pesos (of 97 cents), (1892).

What are the principal Cuban exports?

Sugar, rum, tobacco, mahogany, and other timber, cedar wood, honey, wax, fruits, skins, sponges.

TOTAL
EXPORTS

What was the total value of exports from Cuba during the fiscal year 1896?

\$91,395,536.

What were the principal dutiable articles imported from Cuba* during 1897?

Unmanufactured tobacco (\$2,306,067); manufactured tobacco (\$1,971,214); sugar (\$11,982,473).

What was the value of dutiable imports from Cuba* in 1897?

\$17,136,756.

What were the principal articles imported free of duty from Cuba* in 1897?

Fruits, including nuts (\$154,422); molasses (\$5,488); and unmanufactured wood (\$63,670).

UNITED
STATES
IMPORTS

What was the total annual value of free imports from Cuba in 1897?

\$1,270,950.

What is the total annual value of vegetable products exported from Cuba?

\$84,964,685 (1892).

What is the total annual value of mineral products exported from Cuba?

\$3,485,925 (1892).

What is the total annual value of animal products exported from Cuba?

\$871,625 (1892).

* To the United States.

GEOGRAPHICAL NOTES.

ARCHIPELAGOES:—There are four archipelagoes near the island; two on the northern coast, and the other two on the southern.

ARCHIPELAGOES

On the Northern Coast:—Guaniguanico, which extends from Mantua to the port of Mulata, and comprehends the perilous shoals of Los Colorados and the notable keys of Inés de Soto with water-store; Rapado and Santa Isabel.

The Archipelago of Sábana Camaguey may be divided in two parts, one named Sábana, which extends from the Cape Hicácos to the island of Turiguanó, and includes the keys Piedras, Diana, and Copey (in the bight of Cárdenas), Cruz del Padre, with a lighthouse adjoining. Cruz de las cinco leguas, Cayo Bahía de Cadiz, with anchorage and lighthouse, and Cayo Frances opposite Caibarien with anchorage.

The second part is called Camaguey, which Columbus named the "Tingo Garden"; this comprises the island of Turiguanó, notable for its extension and for being situated almost in the center of the island; Cayo Coco, the island of Cayo Romano (divided into two parts), and Paredon Grande with a lighthouse; Baril, Cayo Cruz, Cayo Confites, and the island of Guajaba.

"TINGO GARDEN"

On the Southern Coast:—To the eastward, Jardinas de la Reina, extending from Cape Cruz to Trinidad, comprising Saberinto de las Doce Leguas, and the lowland of Buena Esperanza, and to the westward that of Canarreos or Jardines and Jardinillos, extending from the bay of Cochinos to the lake of Cortez; it contains the keys of Largo, Flamenco, Blanco, Potatillos, Indios, and the notable island of Pines.

CAVES—*On the Northern Coast:*—The most notable capes of the northern coast are: Cape San Antonio, the most westerly point of the island, with a lighthouse named Roncali; Punta Brava at the west of Havana; the projections of Guano, and Maya at the entrance of the bay of Matanzas. At the extreme north lies the cape of Hicácos, and this, in its northern extremity, contains Point Francis, which is the most northerly point of the island. Cape Maternillas is close to the entrance of the port of Nuevitas, with a lighthouse named Colón. Cape Maisí is the extreme oriental terminus, and Cape Lucretia northeast.

CAVES

On the Southern Coast:—Point Ingles, the most southern of the island; Cape Cruz, Point Padre at the west of the entrance of the bay of Cochinos; Points Don

Cristóbal and Punta Gorda at the extreme west of Cape Matahambre in the peninsula of Zapata; Points Fisga and Piedras, which enclose the little gulf called Laguna de Cortés; Cape Corrientes; Point Holandés, which form the mouth of the bight of Juan Claro, and the Point Este, in the Isle of Pines.

PENINSULAS

PENINSULAS:—The most notable peninsulas of the island are Guanahacabibes on the Cape of San Antonio; La Rosa, on the lake of Ariguanabo; Zapata (the largest in the island), Hicacos, five leagues in length, which encloses on the northeast the bight of Cárdenas; Sabinal; Entre-saco, between the ports of Mayarí and Cabonico, and La Torre, between Bánes and Nipe.

CANALS AND STRAITS

CANALS AND STRAITS:—There are many straits and canals around the island; they may be placed in two classes: first, those appertaining to all nations; secondly, those which wholly belong to Cuba. The straits and canals common to all nations are: The Florida Canal; that of Ocampo, between Róques and the Grand Banks of Bahama; the Old Canal of Bahama, which extends from San Juan de los Remedios to the cape of Lucretia, serving for vessels which come from Europe or the east, as does also the canal of Alaminos, which is situate at the north of Matanzas, and serves the vessels which go to Europe, this latter also called the New Canal of the Bahamas; the passage of Maysí, between Cuba and Haiti, the strait of Colon, and that of Yucatan, between the capes of San Antonio and Catoche.

On the Northern Coast:—The canal of Parga opposite to the mouth of the river Palma; the small canal Boca de Marillanes, the principal entrance to the interior port of Sagua la Grande, and the strait Boca de las Carabelas del Principe, between the island of Guajába and the peninsula of Sabinal, by which it is supposed Columbus entered when he discovered the island in 1492.

On the Southern Coast:—The canal of Balándras, at the east of the lowland of Buena Esperanza; that of Cuatro Reales, at the south of the port of Santa Cruz (this serves as the terminus of the maritime division); the canal of Canarreas, which serves the navigation between Batabanó and Cienfuegos; that of Rosario, between the bank of Los Jardines and Jardinillas and the whole island of Pines; the canal of La Hacha, which serves the navigation between Batabanó and Vuelta Abajo; and, finally, the canal Inglés, at the north of the island of Pines.

PORTS

PORTS:—The principal ports of the province of Pinar del Rio are the bight of Cajon, near the bay of San

**PORTS IN
EACH
PROVINCE**

Antonio; the large lake, called a creek, of Guadiana; the harbors of Mántua (with abundant traffic); Baja, Santa Lucía, Cayetano, and La Mulata, a port with anchorage for brigs. Other ports in this province are Bahía Honda, a good port, twenty-eight land leagues from Havana, with anchorage for ships; Ortigosa, a port at the mouth of the river Santiago; Cabanas, a port of the second class, two leagues in extent; Mariel, a port thirteen leagues from Havana; Mosquitos, Guaijábón, and Banés, small ports. The ports of Mapana, Colóma, and Colón, are also in this province.

In the province of Havana the following ports are in use:—Jaimanitas, a small port; Havana, a first-class port with great traffic, having a lighthouse at its entrance; Cojimar, Bacuranao, Rincon, and Jaruco, small ports, and Santa Cruz, an anchoring place.

MATANZAS

In Matanzas province Canasí and Puerto Escondido are both anchorages; Matanzas is a large and frequented harbor; Siguapa has harbor and wharf; Cárdenas, a bight or creek, in the flourishing city of that name, and the frequented harbors of Siguagua, Júcaro, Canal de San Mateo, and La Teja.

The ports in the province of Santa Clara are Sierra Morena, Pozas, and Carabatas harbors; Ságuila Grande, an interior port, stationed seven leagues from the mouth of the river of that name; Granadivilla, a quay of the interior, situate three leagues from the mouth of the river Caonao, and nine from Santa Clara; Caibarién, a large bight, which is used for dry-dock purposes, and otherwise serviceable; San Juan de los Remedios, Perros, or Mamón, a port at the mouth of a river of the same name; and Morón, or Laguna Grande, a lake of some traffic.

On the southern coast is the magnificent port of Cienfuegos. There are also several of smaller size.

CIENFUEGOS

The ports in the province of Puerto Príncipe include La Guanaja, a creek and port, which serves for the commerce of Puerto Príncipe, altho it has lost much of its importance since the construction of the railroad of Nuevitas; Sabinal, a large bay by whose mouth, Boca de las Carabélas, it is thought, Columbus entered when he discovered the country, and Nuevitas, one of the largest ports in the island, with a lighthouse at its mouth.

The ports of the province of Santiago de Cuba are Manatí, Malagneta, and Puerto del Padre, large ports; Gibara, a port for Holguén; Vita, Naranjo, and Bánes, excellent ports; and Maniabón, an interior port.

Other ports in the same province are Nipe, the largest port of the island, and one of the best in the world; Ma-

PORTS BY PROVINCES

yarí, a harbor, situate in the port of Nipe, and three leagues from the city of the same name, with much traffic; Lebisa and Cabonico, large ports, with only one entrance between them; Sagua de Tánamo, an interior port, four leagues from the mouth of the river of that name, with a town and moderate traffic; Baracoa, a creek and port of the city of its name; and Mata, the most easterly port of the island.

The following ports are in the province of Santiago de Cuba on the southern coast:—Guantánamo, a large bay, containing various ports; Cuba, a large and magnificent port, secure and well defended. It has a light-house; Manzanillo, a secure port, with a fortification in the city of its name; Cáuto del Embarcadero, situate twenty-five leagues from the mouth of the river Cáuto, and six from Bayamo, to which port come vessels of 200 tons; and Birama, a large creek.

South of Puerto Principe are Santa Cruz, a bight, twenty-two leagues southward; Sabanalamar, a harbor, very close to the dividing line.

On the Isle of Pines are the ports of Nueva Gerona and Santá Fé, on the river of the same name.

MOUNTAINS IN EACH PROVINCE

MOUNTAINS:—The most notable groups are between Santa Clara and Trinidad, between Havana and Cardenas, and those in the extremes of east and west. There are eleven groups: two in the province of Pinar del Rio, one in the provinces of Havana and Matanzas, four in the province of Santa Clara, one in that of Puerto Principe, and three in that of Santiago de Cuba.

GROUPS IN THE PROVINCE OF PINAR DEL RIO:—1. Guaniguanico, which comprehends the range of its name; the Pan de Azucar; the Pan de Guajaibon, 3,050 feet in height; the acclivity of Cuzco (notable for its equable temperature, and for the excellent coffee produced there), and others.

2. That of Mariel, in which must be distinguished the Mesa del Mariel, 300 feet in height.

PROVINCES OF HAVANA AND MATANZAS:—The group in these provinces extends as far as Cárdenas. The principal mountains are the Sierra of Bejucal, the Sierra of Jaruco, the noted Pan de Matanzas, the acclivity (or loma) of Camoa, on the highroad between Havana and Güines, and others.

PAN DE MATANZAS

PROVINCE OF SANTA CLARA:—1. The Jumaguas group, which comprehends the unimportant sierra of its name, and the Sierra Morena. 2. That of Sahana, which comprehends the Sierras of Matahambre, 1,800 feet in

height, and that of Bamburauao and Jatibonico, in San Juan de los Remedios, which contains pure kaolin in its slopes.

3. That of Cubanacan, which contains the craggy mountains of Escambray, the source of teeming rivers, with rich mines of iron and copper, and from which gold and silver were extracted at the period of the conquest.

4. That of Guamuhaya, in which is situate the Sierra of Jagua, between Cienfuegos and Trinidad; the mountains of Trinidad, the Cabeza del Muerto, 3,000 feet high, being the most prominent, and the acclivity, or hillock, of Marcela in Sancti Spiritus contains copper pyrites.

PROVINCE OF PUERTO PRINCIPE:—The only group in the province is that of Camaguey. It contains the range of Cubitas, between Puerto Principe and La Guanaja, famous for its caves, and the mountain of Baytábo, containing rich copper mines.

PROVINCE OF SANTIAGO DE CUBA:—1. The group of Maniabon, which contains the table mountains of Manatí and Gibára, and the heights of Almaquí, from which gold has been extracted, and others.

2. That of Macaca, which extends from the Cape of Cruz to the Baconáo, and is known as the Sierra Maestra. This group contains the highest mountains in the island, especially Pico de Turquino, 7,670 feet in elevation; Ojo de Toro, 3,500; the Gran Piedra, 5,200, notable for a large mole resting loosely on its crest, and the Sierra del Cobre, with many copper mines.

3. That of Sagua Baracoa, in which is to be distinguished the Sierra of Nipe to the south of Nipe; also those of Cristal and of Moa. The ranges of Monte Libano and Monte Táurus, between Guántanomo and Saguade Tánamo, producing great quantities of coffee, and the notable mountains of Yunque.

RIVERS:—The majority of the Cuban rivers are short and of little value, as nearly all of them flow towards the north or south.

PRINCIPAL RIVERS DISCHARGING THEIR WATERS IN THE NORTH AND EAST, PROVINCES OF PINAR DEL RIO AND HAVANA:—The Mántua, Pan de Azucar, Bánes, Marianao, and Almendares (the ancient Casiguáguas). This last rises in the hillock of Gallo in Tapáste, and is then called Calabazar, discharging two leagues west of Havana, supplying water to the city by means of an iron aqueduct and a trench which, at present, is only used for irrigation purposes.

PROVINCE OF MATANZAS:—The Yumari, the Canímar and the San Juan, which are navigable and discharge

MOUNTAINS BY PROVINCES

HEIGHTS OF ALMAQUI

RIVERS IN EACH PROVINCE

RIVERS BY PROVINCES

into the bay of Matanzas; the tortuous river of La Palma, navigable for three miles only, and others of short course.

PROVINCE OF SANTA CLARA:—That of Sagua la Grande, the largest of the northern coast. It rises in the mountains of Escambray, and its length is 35 leagues (seven of which are navigable). The Caonao, navigable for four and a half miles; Sagua la Chica, which also rises in Escambray (Cubanacan group), and forms the boundary line between Sagua, Villa Clara, and Remedios.

Other rivers met with in this province are the Zatibonico del Norte, which rises in the sierra of that name, disappears for a distance from its source, and then reappears, forming roaring cascades.

PROVINCE OF PUERTO PRINCIPE:—The Los Perros river, with a port for coast trade; the Yana, which discharges at the east of the island of Turiguanó; the Caonao, a river of some length; the Maximo, which discharges in the bay of Sabinal, and is only remarkable for the supposition that Columbus disembarked at its mouth when he discovered the island on the 14th of October, 1492.

THE MAXIMO

PROVINCE OF SANTIAGO DE CUBA:—The Yarigua, which terminates in the port of Manatí; the Mayarí, with three cascades, discharging at the mouth of the port of Nipe; the Moa, short, but with a cascade, 300 feet in depth in its affluent, the Tayaguabón; the Toa, a considerable river, which discharges at the northwest of Baracoa; and finally the Macaguanigua, which discharges in the port of Baracoa, carrying small pearls in its mouth. On the shores of the Macaguanigua fine opals have been found.

RIVERS OF THE SOUTHERN COAST FROM EAST TO WEST:—Province of Santiago de Cuba: the Jojó, which is traversed eighteen times by the road from Cuba to Baracoa, within four leagues only; the Sabanalar, the boundary between Guantanamo and Baracoa; the Cáuto, the largest and richest river of the island, rising in the Sierra del Cobre, and having a course of 60 leagues. The Cauto has affluents of little importance, and has been navigable since the year 1516.

THE CAUTO

PROVINCE OF PUERTO PRINCIPE:—The Jobába; the Najasa, at the south of Puerto Principe; the San Pedro, or Santa Clara, 23 leagues in length, and which in its origin receives the rivulets Tinima and Jatibonico, which cross the province of Puerto Principe and the Sabanalar.

PROVINCE OF SANTA CLARA:—Jatibonico del Sur, which passes by San Antonio del Jibaro; it is navigable by

schooners for the space of three leagues; the Zaza, thirty-five leagues in length, passes by the town of Algodon. The town of Túnas is at its mouth. The San Juan, which is the boundary between Trinidad and Cienfuegos; the Arimao, which waters the plains of Manicaragua, and discharges opposite the port of Jagua (Cienfuegos), with which it is united by an arm; the Salado and Damuji, and the Hanábana, which rises at the south of the town of Alvarez, and discharges in the lake of Tesoro.

PROVINCE OF HAVANA:—The Atiquanico, which discharges in the lake of La Broa, and defines the limits between the provinces of Santa Clara and Havana; the Mayabéque, which, rising in the Catalina, and passing by Güines, waters the fertile plains of that city; the Govéa, which discharges in the lake of Ariguanabo; the San Antonio, which rises in this lake, and romantically submerges itself below an ancient and spreading ceiba tree, at the south of San Antonio, after having traversed the city.

PROVINCE OF PINAR DEL RIO:—San Diego, eleven leagues in length, which rises in one of the rifts of the Gavilanes, and, in its course, passes under a remarkable natural arch, called Las Portales; it passes by the baths of San Diego, and the landing place of Herman Cortés, and discharges close to the anchorage of Dayaniguas; La Coloma, with a fort; Guáma, which passes Pinar del Rio; Rio Hondo, San Juan y Martinez, with excellent fields of tobacco on its shores; and, finally, the Cuyaguatete, which, traversing a natural arch known as the Resolladero, discharges in the lake of Cortés. This last named river is the largest of the Vuelta-Abajo.

LAKES:—The principal lakes in Cuba are Melones, Siguanea, Algodon, and Lopez; the lakes of Guadiana and Cortez; that of Santa Maria, close to San Luis; the immense lake of Ariguanabo, at the north of San Antonio de los Banos, having an area of two leagues, a depth of six rods, and an abundance of fish. There are also the lakes of Guanamón, at the south of Nueva Paz; that of Guanajaybo, close to the railroad of Jucáro; that of Tesoro, on the north of the bay of Cochinos; and the improperly called lagoons of Maya and Moron, which are really extensive lakes.

ROADS:—The principal roads in Cuba include one of 15 miles from Coloma to Pinar del Rio; another of 57 miles from Havana to San Cristóbal, continuing to Pinar del Rio towards Guanajay; this is called the Western Road, and turning from this point (Guanajay), becomes south-west; a third from the corner of Tejas towards Bejucal, of

RIVERS BY PROVINCES

THE SAN DIEGO

LAKES

ROADS

ROADS

16 miles, is called the Southern Road; a fourth from the town of Batabano to the anchoring place of the same name, is $2\frac{1}{2}$ miles in length; a fifth from the corner of Toyo to Güines, known as the Southeast Road, and a sixth denominated the Eastern Road, runs from Luanó to La Gallega. It is 11 miles in length, and will be prolonged to Matanzas.

PROVINCES AND CITIES.

There are six provinces, *i. e.*, Pinar del Rio, Havana, Matanzas, Santa Clara, Puerto Principe, and Santiago de Cuba.

**PROVINCES
AND
CITIES****PROVINCE OF PINAR DEL RIO.**

BOUNDARIES:—N., Gulf of Mexico; E., the province of Havana; S., the Sea of the Antilles; W., the Strait of Yucatan.

As constituted under the late government, Puerto Principe is divided into four judicial districts, *i. e.*, Pinar del Rio, San Cristóbal, Guanajay, and Guane.

CITIES AND TOWNS.

DISTRICT OF PINAR DEL RIO:—Pinar del Rio, Alonso Rojas, San Luis, Viñales, Consolación del Norte, and Consolación del Sur.

DISTRICT OF SAN CRISTÓBAL:—San Cristóbal, Candalaria, Las Mangas, Paso Real de San Diego, Los Palacios, San Diego de los Baños, and Santa Cruz, and de los Pinos.

**PINAR
DEL RIO
PROVINCE**

DISTRICT OF GUANAJAY:—Guanajay, Mariel, Guayabal, Cayajábos, Bahía Honda, Cabañas, and San Diego de Núñez.

DISTRICT OF GUANE:—Guane, Baja Mantua, San Juan, and Martínez.

Pinar del Rio is the capital of the province. It possesses a Criminal Court of Appeals and an Institute of Secondary Instruction. It is located $157\frac{1}{2}$ miles southwest of Havana.

San Cristóbal is located 77 miles from Havana. In its district lies the harbor of Dayaniguas, a sea-bathing place.

Guanajay is a small town, and the terminus of the railroad branch of its name. It is on the highway of Vuelta Abajo, 35 miles from Havana.

HAVANA**PROVINCE OF HAVANA.**

BOUNDARIES:—N., the Florida Canal; E., the province of Matanzas; S., the Sea of the Antilles; W., the province of Pinar del Rio.

JUDICIAL DISTRICTS:—Havana (north province and south province), Havana City, Guanabacoa, Marianao, Jaruco, San Antonio de los Baños, Bejucal, and Güines.

DISTRICT OF HAVANA:—La Habana and Maranao.

DISTRICT OF GUANABACOA:—Guanabacoa, Regla, Santa María del Rosario, and Managua.

DISTRICT OF JARUCO:—Jaruco, Bainoa, Aguacate, San José de las Lajas, San Antonio del Río Blanco del Norte, Jibacoa, Tapaste, and Casiguas.

DISTRICT OF SAN ANTONIO DE LOS BAÑOS:—San Antonio, Seiba del Agua, Alquizar, Güira de Melena, and Vereda Nueva.

DISTRICT OF BEJUCAL:—Bejucal, Batabanó, Quivican, San Antonio de las Vegas, La Salud, Bauta el Cano, Santiago de las Vegas, Isla de Pinos, and San Felipe.

DISTRICT OF GÜINES:—Güines, La Catalina, Melena del Sur, Madruga, Nueva Paz, San Nicolás, and Pipian.

The following descriptive matter is taken from data furnished to the government by consular officers in 1896:

HAVANA:—Havana, the capital city of the province of the same name, and of the Island of Cuba, is situated on the west side of the bay of Havana (formerly called Carenas), on a peninsula of level land of limestone formation, in latitude $23^{\circ} 8' 15''$ north, and longitude $88^{\circ} 22' 45''$ west, and is on the narrowest part of the island.

It is the seat of the general government, Superior Court of Havana (Audiencia), general direction of finance, naval station, arsenal, observatory, diocese of the bishopric, and the residence of all the administrative officers of the island (civil, military, maritime, judicial, and economic).

It is over 3,500 miles from Cadiz, 1,240 miles from New York, and 90 miles from Key West.

Its strategic position at the mouth of the Gulf of Mexico has aptly given it the name of the Key of the Gulf, and a symbolic key is emblazoned in its coat of arms.

The entrance to the harbor, guarded on one side by the Morro and the frowning heights of La Cabaña Fort, and on the other by the Punta and Reina batteries, is narrow, but expands into a wide and deep harbor, where a thousand ships can safely ride.

Havana is, or was, a strongly fortified place, surrounded by imposing fortifications, such as the Cabaña, Morro Castle, Castillo del Principe, Fort Atarés, Punta, Reina Battery, and Fort No. 4.

The streets are generally narrow in the older part of the city, but outside the walls are many wide avenues.

Havana has also its university, institute, seminary, theological and normal schools, academy of painting and

PROVINCES AND CITIES

HAVANA CITY

HAVANA BATTERIES

PROVINCES AND CITIES

sculpture, asylums, civil, military and private hospitals, several theaters, the principal one, Tacon, being widely celebrated; a number of clubs, political, social, etc.; societies of instruction and recreation, large markets, a system of magnificent waterworks, an extensive and beautiful cemetery, sea baths, etc.

Along the coast are summer places of resort, connected with the city by lines of horse and steam-cars.

Guanabacoa is a bathing resort, 7 miles from Havana. It is reached by the highway of Luyanó.

San Antonio is one of the termini of the branch railroad of Guanajay. It is also a sea-bathing resort.

There are many churches and convents; a commemorative chapel fronts the palace close to a large ceiba tree, under which Diego Velasquez, the founder of the city, caused mass to be celebrated in 1519.

There are numerous cigar and cigarette factories, tanneries, manufactories of sweetmeats, rum, candles, gas, beer, carriages, soap, perfumery, glycerin, etc.

POPULATION OF HAVANA CITY

The population of Havana, from the last official estimate, is about 220,000.

Its principal exports to the United States consist of tobacco, fruit, wax and honey, sugar, and molasses.

All kinds of breadstuffs, lumber, coal, and machinery are imported from the United States.

The climate is generally warm and humid, and marked by two clearly defined seasons—the wet and dry—the former ranging from June to December, September and October being considered the hurricane months. The trade winds blow generally with great regularity, and the heat of the day is cooled by evening breezes.

PROVINCE OF MATANZAS.

BOUNDARIES:—N., the Florida canal; S. and E., the province of Santa Clara; W., that of Havana.

JUDICIAL DISTRICTS:—North and South Matanzas, Cárdenas, Alfonso XII., and Colón.

CITIES AND TOWNS.

MATANZAS PROVINCE

DISTRICT OF MATANZAS:—Matanzas city, Santa Ana, Canasí, and Guamacaro.

DISTRICT OF CÁRDENAS:—Cárdenas, Guamutas, Guanajayo, Cimarrones and Lagunillas.

DISTRICT OF ALFONSO XII.:—Alfonso XII., Bolondrón, Cabezas, Sabanilla del Encomendar, and Union de los Reyes.

DISTRICT OF COLÓN:—Colón, Jovellanes, Roque, Palmillas, Cervantes, Cuevitas, Macurijes, Macagua, and San José de los Ramos.

Matanzas is beautifully situated on Matanzas Bay, on the north coast of Cuba, 60 miles east of Havana. It is divided into three parts by rivers, the principal business part occupying the central portion and extending west $1\frac{1}{2}$ miles.

The chief warehouses, distilleries, and sugar refineries are on the south of the river San Juan, easily accessible to railroads and lighters.

The population is 49,384, and that of Matanzas province 271,000, according to the 1893 census.

The principal industries are rum distilling, sugar refining, and manufacture of guava jelly. There are railroad car and machine shops. Sugar and molasses are sent to the United States, amounting, from 1891 to 1895, to \$59,988,497.

The climate is fine, and Matanzas is considered the healthiest city on the island. With proper drainage and sanitary arrangements, yellow fever and malaria would be almost unknown.

Cárdenas is a seaport on the north coast of Cuba, about 135 miles east of Havana. In 1893 it had 23,517 inhabitants.

The temperature is pleasant during the winter, but from about the middle of May to the middle of October the weather is hot and sultry, the thermometer during the day being usually 94° in the shade and falling some 5° at night.

Sanitary conditions are bad. Yellow fever, typhus, typhoid, and pernicious fevers prevail throughout most of the year, being worse in the hot season. Cases of smallpox also appear at times.

Sugar is the chief article of export. The total exports to the United States in the fiscal year 1895-96 were \$2,920,905; of this sugar represented \$1,872,626. About half the imports are from the United States.

Colón is on a branch of the Malagua railroad. This municipality has, of late years, made great efforts in the direction of educational advancement.

PROVINCE OF SANTA CLARA.

BOUNDARIES:—N., the old canal of Bahama; E., the province of Puerto Principe; S. and W., that of Matanzas.

JUDICIAL DISTRICTS:—Santa Clara, Ságua la Grande, Remedios, Cienfuegos, Trinidad, and Sancti Spiritus.

CITIES AND TOWNS.

DISTRICT OF SANTA CLARA:—Santa Clara, San Diego de la Valle, Esperanza, Ranchuelo, San Juan de las Yeras, and Calabazar.

PROVINCES AND CITIES

CÁRDENAS CITY

SANTA CLARA PROVINCE

**PROVINCES
AND
CITIES**

DISTRICT OF SÁGUA LA GRANDE:—Ságua la Grande, Amaro, Ceja de Pablo, Rancho Veloz, Quemados de Güines, and Santo Domingo.

DISTRICT OF REMEDIOS:—Remedios, Caibarien, Yaguajay, Camajuaní, Placetas, and Taguayabón.

DISTRICT OF CIENFUEGOS:—Cienfuegos, Las Cruces, Camarones, Cartagena, Los Abreus, Rodas, Santa Isabel de las Lajas, and Palmira.

DISTRICT OF TRINIDAD:—Trinidad.

DISTRICT OF SANTO-ESPÍRITU:—Sancti Spíritus.

Cienfuegos is in latitude $22^{\circ} 9'$ north and longitude $73^{\circ} 50'$ west, on a peninsula in the bay of Yagua, 6 miles from the sea.

The depth of water at the anchorage in the harbor is 27 feet, and at the different wharves from 14 to 16 feet.

The commercial importance of the place was recognized some forty years ago, and has increased with the development of the sugar industry. This port is now the center of the sugar trade for the south of the island.

It is connected by rail with Havana and the principal points on the north of the island.

CIENFUEGOS The population in 1895 was 24,030.

Sugar and tobacco are exported to the United States, and soap and ice are manufactured.

The climate from December 1 until May is dry and moderately warm, the temperature ranging from 60° to 78° during the day and falling several degrees at night. At this season almost constant winds prevail from the northeast or northwest, accompanied by clouds of dust. For the rest of the year the temperature ranges from 75° to 93° , descending a few degrees at night.

During this season there are frequent and heavy rain-falls and windstorms. The yellow fever is then epidemic. But little attention has hitherto been given by the municipal authorities to hygiene or to sanitary measures. Under the present administration, Cienfuegos, in common with all other Cuban cities, is undergoing a thorough cleansing and sanitary purification, to minimize the dangers arising from epidemic diseases.

Water for household purposes is insufficiently supplied by two small plants, the principal source being the Jico-tea River, 10 miles distant.

The death rate is 42.82 per 1,000.

**SAGUA LA
GRANDE**

Ságua la Grande is situated on the Sagua River, 11 miles from the port.

The export trade is confined almost exclusively to sugar.

The population is about 18,000.

The climate and sanitary arrangements are superior to those of most Cuban towns.

Trinidad de Cuba is located on the slope of the mountain called La Vija (Lookout), which has an elevation of about 900 feet above sea level.

The port, Casilda, lies about 1 league to the south: the harbor is almost landlocked and has very little depth.

Vessels drawing 10 feet 6 inches are liable to run aground with the least deviation from the tortuous channel.

About half a mile west of Trinidad is the river Guarabo, navigable for small boats only.

Four miles east lies Masio Bay, which will accommodate deep-draft vessels.

The population numbers about 18,000.

Sugar and a little honey are exported.

The climate is very healthy, the death rate being 21 to 26 per 1,000, though sanitary measures are almost unknown. The town is so situated that the heavier it rains the cleaner it becomes.

The town and vicinity are considered the healthiest in Cuba.

PROVINCE OF PUERTO PRINCIPE.

BOUNDARIES:—N., the old canal of Bahama; E., the province of Santiago de Cuba; S., the Antilles Sea; W., the province of Santa Clara.

JUDICIAL DISTRICTS:—Puerto Principe north, Puerto Principe south, and Morón.

CITIES AND TOWNS.

Puerto Principe, Nuevitas, Santa Cruz de Sur, Morón, and Ciegode Avila.

Puerto Principe (Santa Maria de) is the capital of the province, and is located in the center of one of the widest parts of the island, distant $528\frac{1}{2}$ miles from Havana, and 77 miles from the port of Morón. In 1887, the population of Puerto Principe was 40,958. The city is built in damp lowland, with poor houses erected on wooden piles. It has one court-house. The manufacture of cigars is large; sugar, tobacco, wax, honey are important export articles.

Santa Cruz del Sur is situated immediately in front of the sea, the houses being sometimes touched by the waves when the tide is high.

There is but one street, which extends from east to west, and is about $1\frac{1}{4}$ miles in length.

The ground behind the houses is swampy and impassable.

The population numbers about 1,500.

PROVINCES AND CITIES

TRINIDAD DE CUBA

PUERTO PRINCIPE PROVINCE

**PROVINCES
AND
CITIES**

Cedar, mahogany, honey, and wax are shipped to the United States to the annual value of \$300,000 to \$400,000.

The climate may be called good, when the bad situation of the town and the lack of sanitary measures are considered.

For several years there had been no case of yellow fever, but with the arrival of the Spanish troops it developed and spread widely, owing to the utter lack of hospitals and medical assistance. As soon as the troops were removed, however, the disease disappeared, and the health has been good since that time, with the exception of some few cases of paludic fever, to which, it seems, the climate is inclined.

Santa Cruz is the seat of a court of appeal. It also contains an institution of secondary instruction.

PROVINCE OF SANTIAGO DE CUBA.

**SANTIAGO
PROVINCE**

BOUNDARIES :—N., the old canal of Bahama ; E., El Paso de los Vientos, or Maysí, which separates it from the island of Haiti or San Domingo ; S., the straits of Colón, which separate it from Jamaica ; W., the gulf of Guaycanayabo, and the province of Puerto Principe.

JUDICIAL DISTRICTS :—Norte de Cuba, Sur de Cuba, Mazanillo, Bayamo, Holguín, Baracoa, and Guantánamo.

DISTRICT OF SANTIAGO DE CUBA :—Santiago de Cuba, Cobre, Caney, Dos Caminos, Alto Songo, and Ságua de Tánamo.

DISTRICT OF MAZANILLO :—Mazanillo.

DISTRICT OF BAYAMO :—Bayamo and Jiguaní.

DISTRICT OF HOLGUÍN :—Holguín, Gibára, and Maysí.

DISTRICT OF BARACOA :—Baracoa.

DISTRICT OF GUÁNTANAMO :—Guántanamo.

**SANTIAGO
DE CUBA**

Santiago de Cuba, the second city in size on the island, is probably the oldest city of any size on this hemisphere, having been founded by Velasquez in 1514.

It fronts on a beautiful bay 6 miles long and 2 miles wide, on the southeastern coast of Cuba, 100 miles west of Cape Maysí.

The population in 1895 was 59,614.

The mean temperature in summer is 88° ; in winter, 82°.

It is regarded as very unhealthy, yellow fever being prevalent throughout the year, and smallpox epidemic at certain times. These conditions are due to the lack of sanitary and hygienic measures, all refuse matter, as well as dead dogs, cats, chickens, etc., being thrown into the streets to decay and fill the air with disease germs.

A railroad, called the Sabanilla and Marote, runs from

PROVINCES
AND
CITIES

the city to San Luis, 25 miles distant, with a branch to Alto Songo, 12 miles in length. It is largely owned and controlled by citizens of the United States.

Santiago is the headquarters for three large mining plants owned by United States citizens, viz., the Jurugua, the Spanish-American, and the Sigua, together representing the investment of about \$8,000,000; the last named are not in operation.

There are a number of tobacco factories, but the chief business is the exportation of raw materials and the importation of manufactured goods and provisions.

Sugar, iron ore, manganese, mahogany, hides, wax, cedar, and tobacco are exported to the United States.

Baracoa (La Asuncion de), was the first city founded by Diego Velasquez in 1512.

BARACOA

It is on the extreme eastern part of the island on the north side.

The population is about 7,000 under normal conditions.

Its chief industry is the grinding of coconuts to extract oil. There are two establishments with a capacity of 30,000 coconuts daily, employing about fifty workmen. There is also a petroleum refinery (closed at present), and a chocolate factory.

Bananas and coconuts are exported to the United States (\$628,811 worth in 1895), Norwegian steamers being employed because of their cheapness as compared with United States vessels.

The climate is pleasant, the average temperature being 78°; the winds prevailing during the summer are from the southeast.

Bayamo (San Salvador), is on a river of the same name; it is distant 112 miles from Santiago.

El Cobre is a village in close proximity to various rich copper mines. The mineral is exported by a railway, reaching to the port of Sal Santiago.

EL COBRE

The population of Guantanamo numbers about 7,000.

The city is situated fifteen miles from the bay, with which it is connected by rail.

The raising of sugar and coffee are the chief industries of the vicinity. Sugar and lumber are exported to the United States.

The climate, cool in winter, is very warm in summer.

El Caney is an ancient Indian village. It is connected with Santiago de Cuba by railway.

Holguín is a charming city, well laid out.

Manzanillo, in the province of Santiago de Cuba, is situated on the inner part of the bay of the same name.

MANZANILLO

The population, when the war broke out, numbered from 10,000 to 12,000.

**PROVINCES
AND
CITIES**

Exports to the United States consist chiefly of sugar, cedar, mahogany, tobacco, palm-leaves, hides, etc.

STATISTICS OF THE PROVINCES (*latest available.*)

PROVINCE.	Sq. km. * area.	Popula- tion.	Pop. per Sq. km.
Matanzas	8,250	300,000	37.
Havana	8,450	480,000	57.
Puerto Principe (Camaguey)	30,950	72,000	2.3
Santa Clara (Las Villas)	22,280	360,000	16.2
Pinar del Rio	44,450	320,000	7.2
Santiago de Cuba (Departa- mento Oriental)	34,400	230,000	6.7
Total	118,830	1,762,000	14.8

**VEGETABLE
KINGDOM**

**VEGETABLE, MINERAL AND ANIMAL
KINGDOMS.**

Spanish names with English equivalents.

VEGETABLE KINGDOM—CUBA.

Agricultural.

Algodon	Cotton.
Cacao	Cocoa.
Cafetó	Coffee and its industry.
Cana de azúcar	Sugar cane.
Goma elástica	India rubber.
Jenjibre	Ginger.
Manzanas	Apples (in temperate de- grees).
Membrillo	Quince.
Mostaza	Mustard.
Orozuz	Licorice.
Peras	Pears.
Pimienta	Pepper.
Tabaco	Tobacco.

Trees and Woods.

**TREES AND
WOODS**

La ácana	Hard red wood tree.
La ácana quiebrahacha	The break axe red wood, (vulgar).
La caoba	The mahogany tree.
El cedro	The cedar tree.

* The square kilometer equals 1,000 square meters of 1,196 square yards = 1,196 square yards = .00083 square miles.

La cieba.....	5 leaved silk cotton tree (indigenous).
Diversas palmas.....	Divers palm trees.
El ébano.....	The ebony (cabinet mak- ing wood).
La encina.....	Evergreen oak.
El guayabo.....	The guava tree.
El guayacan.....	Lignum vitæ tree (Hibis- cus).
El jiqué.....	The indigo tree.
El mangle.....	The mangrove tree.
El majagua.....	Hibiscus tiliaceus (cord- age industry).
El fustete.....	Red sumach.
El ocuje.....	Calambuc tree.
El palo de campeche.....	Log-wood (dye works).
El pino de tea.....	Pitch pine.
El plántano.....	The banana tree.
El sabicú.....	The flowering acacia.
El roble.....	The oak (ship building wood).

**TREES AND
WOODS**

Fruits.

El anón.....	The custard apple (sweet sap).
La ciruêla.....	The cherry.
La guanába	The custard apple (sour).
La guayacama	The date plum.
La lima.....	The lime.
El mamey colorado y amarillo	The red and yellow mam- mee.
El marañon.....	The common cashew nut.
Naranjas de varias especies..	Oranges of various kinds.
La nispola.....	The medlar nut.
La pina.....	The pineapple.
La toronja.....	The citron.
El zapote mamey.....	The sweet sapota.
El membrillo.....	The quince.

FRUITS

Flowers.

La adélia	The oleander.
Clavelas	Carnations.
Crisantemo grande.....	Moonflower.
Cereus de noche.....	Night-blooming cereus.
Flor de la pasion.....	Passion flower.
Lirios varios.....	Various lilies.
La magnolia.....	The magnolia.
Rosas.....	Roses.

FLOWERS

MINERALS—CUBA.

MINERALS

Agata.....	Agate.
Alabastro.....	Alabaster.
Amianto.....	Asbestos.
Antimonia.....	Antimony.
Arena o barrio refractorio...	Sand and glittering clay.
Asfalto	Asphalt.
Bismuto	Bismuth.
Calcedonia.....	Chalcedonyx.
Carbon de piedra.....	Mineral coal.
Cobre.....	Copper (very abundant and good).
Cornelina.....	Cornelian.
Granito.....	Granite.
Hierro	Iron.
Iman.....	Loadstone.
Jaspe	Jasper.
Kaolín verdadero—Mármol— Marble.	Pure mineral earth, used in France to manufacture the celebrated Sévres porcelain.
Ópalo	Opal.
Oro	Gold.
Pizarra	Slate.
Plata.....	Silver.
Platino.....	Platina.
Plomo.....	Lead.
Serpentina	Serpent stone.
Sienita.	Sienite.
Sulfato de barita.....	Sulphur of baryta.
Sal-gema	Rock salt.
Yeso.....	Gypsum.

MAMMIFEROUS ANIMALS—CUBA.

MAMMI-
FEROUS
ANIMALS

El amiquí escaso.....	The ant-eater, rare.
El asno.....	The ass.
El carajabali.....	The Carribean hog.
El caballo.....	The horse (small, usually).
El carnero; rinde poca lama..	The sheep, which gives little wool.
La cabra.....	The goat.
El cerdo.....	Common pig.
El cerdo <i>criolla</i> de que la carne es muy estimado fuera de la isla.	The criolla pig, the flesh of which is in great re- pute beyond the island.
El toro.....	The bull.
Murciélagos, 20 especies.....	20 kinds of bats.
La Jutia.....	Agoti, or Indian bat.
Delfines.....	Dolphins.
Ratas.....	Rats.

BIRDS DISTINCTLY CUBAN.

Aguaíta caiman.....	Spotted heron.
Los carpinteros.....	Woodpeckers, green and variegated.
El calo.....	Wood ibis.
El frailecillo.....	The plover.
El gavilán aplomado.....	The lead-colored hawk.
El guacemayo.....	The macaw.
El negrito.....	The black bullfinch.
El mayito.....	The oriole.
La Siguapa.....	The Siguapa owl.
El sinsonte prieto.....	The black mocking bird.
El siju.....	The sparrow owl.
El savanero.....	The meadow lark.
El tomequin de Pinar.....	The goldfinch of Pinar.
El zorzal real.....	The red-footed black bird.
El zorzal gato.....	The cat bird.
El zunzun.....	The humming bird.

And many others without common name.

**BIRDS DIS-
TINCTLY
CUBAN**

BIRDS INDIGENOUS TO CUBA AND THE OTHER
ANTILLES.

El cao.....	The Cuban crow.
El cernicalo.....	The kestrel hawk.
La codorniy.....	Cuban quail.
La cotorra.....	White parrot.
El creguete chico.....	The small weaver bird.
El guabairo chico.....	The small goat-sucker.
La lechuza.....	The screech owl.
La pedlorrera.....	The tody bird.
El pitirre real.....	The king fly-catcher.
El pitirra guatibére.....	The crying fly-catcher.
El tomequin.....	The goldfinch.
La torcaz morada.....	Violet-colored pigeon.
La torcaz salvaje.....	The gray wild pigeon.
La yaguaza.....	The black whistling duck.

Another species of whistling duck.

**BIRDS IN-
DIGENOUS
TO CUBA**

BIRDS INTRODUCED INTO CUBA, AFTER ITS
DISCOVERY.

El pavo común.....	The common turkey.
El pavo real.....	The peacock.
El ganso.....	The goose.
Varias especies de patos.....	Various kinds of ducks.
La gallina común.....	The common hen.
El faisán.....	The pheasant.
La paloma.....	The dove.
La gallina de Guinea.....	The Guinea hen.

**BIRDS IN-
TRODUCED**

INSECTS—CUBA.

INSECTS

La abeja.....	The common bee.
La abeja criolla, que produce cera negra y no tiene aguijon.	The <i>criolla</i> bee, which produces black wax and has no sting.
La abeja de Castilla que produce una cera blanca exquisita.	The Castilian bee, which produces an exquisite white wax.
La avispa.....	The wasp.
La araña peluda, venenosa pero no mortal.	The hairy spider; venomous, but not mortal.
El ciento-pies, pernicioso	The centipede; pernicious.
El cocuyo.....	Luminous glow-worm or fire-fly.
El comejen destructor.....	Destructive moth.
La guagua, destructor de las frutas.	The Cuban guagua, a ravager of all fruits.
Hormigas numerosas.....	Ants of all kinds.
La hormiga Bibijagua; pernicioso.	The Bibijagua ant; pernicious.
Mosquitos, varias especies...	Various kinds of mosquitos.
La Nigua, insecto indigeno; muy pernicioso.	The chigoe, an indigenous insect; most pernicious.
La oruga común.....	The common caterpillar.
La oruga del pimiento; indigena que vive en el arbol pimiento solamente.	The pepper-tree caterpillar, which feeds and lives on the pepper-tree solely.

And besides, numerous insects of all classes.

FISH—CUBA.

Among 700 species the following may be distinguished:

FISH

La anguila.....	The eel.
El atún	The tunny fish.
La almeja	The mussel.
La cabrilla.....	The prawn.
El calamar.....	The calamary or sepia.
El camarón.....	The shrimp.
El cangrego	The crab.
La cherna	A fish resembling salmon.
El dorado.....	Gilt head cod.
La langosta.....	The lobster.
El ostión—Cuban name.....	The oyster.
La ostra—general name	The oyster.
El pez sierra.....	The saw fish.
El pulpo.....	The polypus.
El robalo.....	A kind of bream.

Tiburones (terribles)..... Sharks numerous and terrible.

Remark—The *morena verde* (frog-bit), and the *escombro* (mackerel), are unsafe to be eaten, as they induce the disease known in Cuba as *siguatera*, or fish jaundice.

Madrepores, corales..... Madrepores, corals.

Y esponjas and sponges.

FISH

REPTILES—CUBA.

Alacranes..... Scorpions.

Caguamas Green turtle.

Careyes..... Shell tortoise.

Crocodilos, 2 especies..... Crocodiles, 2 kinds.

Yicoteas..... Mud turtles.

Lagarto..... Lizard.

Lagarto chipoyo..... Great chipoyo lizard.

Iguanas..... Iguanas.

Maja, boa serpiente, no venenosa, pero es capable trag- Maja, serpent, not venomous, but is equal to swallowing a fowl or a cat entero. entire.

Sapos y ranas muy numerosos, Toads and frogs in great number.

REPTILES

COMMERCE.

A British foreign office report, *a*, from Madrid (Annual Series, No 1851, 1897), gives the value of the imports of Cuba during the fiscal year ending April, 1896, as \$66,166,754, and of the exports as \$94,395,536.

The trade of the United States with Cuba since 1891 is given as follows by the Bureau of Statistics, Treasury Department:

DESCRIPTION.	1891	1892	1893	1894	1895	1896	1897
Imports:	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Free.....	26,044,502	66,140,835	66,049,369	67,418,289	17,684,765	2,074,763	1,270,059
Dutiable.....	35,669,893	11,790,836	12,657,137	8,259,972	35,186,494	37,942,967	17,136,756
Total.....	61,714,395	77,931,671	78,706,506	75,678,261	52,871,259	40,017,730	18,406,815
Exports:							
Domestic.....	11,929,605	17,622,411	23,604,094	19,855,237	12,533,260	7,312,348	7,599,757
Foreign.....	205,283	331,159	553,604	270,084	274,401	218,532	660,019
Total.....	12,224,888	17,953,570	24,157,698	20,125,321	12,807,661	7,530,880	8,259,776

The commerce of Spain with Cuba since 1891 (the figures up to 1895 being taken from a compilation by the Department of Agriculture, *b*, and those for 1896 from a British Foreign Office report, Annual Series, No. 2065, 1898), was:

DESCRIPTION.	1891	1892	1893	1894	1895	1896
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Imports from Cuba.....	7,193,173	9,570,399	5,697,291	7,265,120	7,176,105	4,257,360
Exports from Cuba.....	22,168,050	28,046,636	24,689,373	22,592,943	26,298,497	26,145,800

The trade of Mexico with Cuba during the fiscal year ending June 30, 1897, was: Imports from Cuba, \$363; exports to Cuba, \$26,700. The commerce of the island with the principal European countries can not be given with accuracy, as the various official statistics include Puerto Rico in the statements of trade—the figures for Germany, comprising other Spanish dependencies as well. The commerce of the United Kingdom, France, and Belgium with Cuba and Puerto Rico in 1896 was as follows, the figures for the United States and Spain for the same year being repeated for comparative purposes:

COUNTRY.	Imports.	Exports.	COUNTRY.	Imports.	Exports.
	<i>Dollars.</i>	<i>Dollars.</i>		<i>Dollars.</i>	<i>Dollars.</i>
United Kingdom.....	174,187	5,843,892	United States	40,017,730	7,530,880
Belgium.....	208,304	1,089,239	Spain.....	4,257,360	26,145,800
France.....	3,338,900	424,600			

The trade in the principal articles with the United States in 1893 (when it reached its maximum of value) and in 1897 was:

PRINCIPAL IMPORTS FROM CUBA INTO THE UNITED STATES.

ARTICLES.	1893	1897	ARTICLES.	1893	1897
Free of duty:					
Fruits, including nuts			Dutiable:		
Molasses.....	2,347,800	154,422	Tobacco—		
Sugar.....	1,081,034	5,448	Unmanufactured	8,940,058	2,306,067
Wood, unmanufactured	60,637,631	.....	Manufactured.....	2,727,030	1,971,214
	1,071,123	63,670	Iron Ore.....	641,943	.....
			Sugar.....	.....	11,982,473

a Reports by United States representatives on commercial conditions in Cuba and Puerto Rico have been meager for the past two years, owing to the absorption of the consular officers in the political conditions in the islands.

b Spain's Foreign Trade, Frank H. Hitchcock, 1898.

PRINCIPAL EXPORTS FROM THE UNITED STATES TO CUBA.

ARTICLES.	1893	1897
	<i>Dollars.</i>	<i>Dollars.</i>
Wheat flour.....	2,821,557	564,638
Corn.....	582,050	247,905
Carriages and Street cars, and parts of....	316,045	3,755
Cars, pass'g'r and freight, for steam R.R....	271,571	9,202
Coal.....	931,371	638,912
Locks, hinges, and other builders' hdw....	395,964	49,386
Railroad bars, or rails, of steel.....	326,654	14,650
Saws and tools.....	243,544	34,686
Locomotives.....	418,776	20,638
Stationery engines.....	130,652	1,189
Boilers and parts of engines.....	322,284	35,578
Wire.....	321,120	35,905
Manufactures of leather... ..	191,394	39,753
Mineral oil.....	514,808	306,916
Hog products.....	5,401,022	2,224,485
Beans and peas.....	392,962	276,635
Potatoes.....	554,153	331,553
Boards, deals, planks, joists, etc.....	1,095,928	286,387
Household furniture.....	217,126	34,288

The British consul-general at Havana, Mr. Gollan (Foreign Office Annual Series, No. 1880, 1897), gives the following table, showing the chief articles of import into Cuba in 1896:

ARTICLES.	FROM—		Total Value.
	Europe.	America.	
			<i>Dollars.</i>
Butter.....cases..	6,338	54	319,700
Cheese.....do....	1,881	44,358	323,673
Rice.....cwt....	853,538	23,800	2,807,481
Beer.....barrels..	4,629	2,860	82,379
Do.....cases....	6,574	2,044	43,090
Salt fish.....drums..	5,036	79,521	686,000
Flour.....bags....	404,019	100,321	4,285,522
Coal.....tons....	29,050	180,487	2,085,370
Potatoes.....barrels..	53,082	231,774	996,702
Maize.....bags....		97,303	467,049
Lard.....cwt....		194,308	2,078,811
Total.....			14,175,777

The tobacco crop on an average, says the consul-general, is estimated at 560,000 bales (1 bale=110 pounds), 338 bales being exported, and the remainder used in cigar and cigarette manufacture in Havana. The cigars exported in 1896 numbered 185,914,000. Tobacco leaf exported in 1895, 30,466,000 pounds; in 1896, 16,823,000 pounds; the decrease being due to a decree of May, 1896, forbidding tobacco-leaf exports except to Spain. About 80,000 of the inhabitants are ordinarily engaged in the cultivation of tobacco.

SUGAR INDUSTRY.

The British consul-general gives the following details in regard to the sugar trade in 1895 and 1896:

DESCRIPTION.	QUANTITY.	
	1895	1896
	<i>Tons.</i>	<i>Tons.</i>
Exports.....	832,431	235,628
Stocks.....	135,181	36,260
Local consumption.....	967,612 50,000	271,888 40,000
Stock on January 1 (previous crop).....	1,017,612 13,348	311,888 86,667
Total production.....	1,004,264	225,221
Decrease in 1895-96.....	779,048	
Equivalent to.....	77.574 per cent.	

Mr. Gollan adds:

Cuba in normal times may be said to be one of the most favored countries of the world for the economical production of sugar. The present condition of affairs greatly burdens the sugar industry, owing to the necessity of protecting the estates, the loss of cane through incendiary fires, and the difficulty at all times of getting enough hauled to the works to use them to their full capacity.

Under normal conditions the contrast between the Cuban industry and that of other West Indian Islands, or any American sugar-producing country, is remarkable. The total sugar crop of any other island is equal only to the output of three or four of the largest Cuban manufactories, and, with the exception of Demerara, all these countries show considerable inferiority to Cuba in methods of manufacture and in the class of machinery in use. The neglect of the other West Indian planters to advance with the times is the main cause of this lack of prosperity at the present moment. Of the other cane-sugar countries of the world Java is the only one which comes within 50 per cent. of the amount of sugar produced annually in Cuba in normal times, and Java and the Hawaiian Islands are the only ones which are generally advanced in the process of manufacture.

Until a very recent date the manufacture of sugar and the growing of the cane in Cuba were extremely profitable undertakings, and the reasons for their prosperity may be stated as—

(1) The excellence of the climate and the fertility of the soil, which allow of large crops of good cane. The rainfall, about 50 inches, is so distributed that irrigation is not a necessity, though it would in many cases be advisable.

(2) The great movement toward the centralization of the estates which took place in the early eighties; planters having understood the value of large sugar houses and overcome their difficulty in this way.

(3) The proximity of the United States, affording, as it does, a cash market for the sugar.

In spite of the above advantages, continues the consul-general, the size of the sugar crop is a matter of surprise to many, while elsewhere the industry must be fostered by bounties. The agricultural adaptability of the country, however, counts for much;

the cost of labor is low, and the sugar houses have a larger daily capacity than those of any other country.

The exports of sugar to Spain during the three years ending in 1896 are given as follows in a British Foreign Office Report (Annual Series, No. 1851, 1897):

	Tons.
1894.....	24,240
1895.....	26,991
1896.....	14,642

It should be noted that during the same period the exports of sugar from Puerto Rico to Spain increased from 13,000 to 18,000 tons.

COMMERCE OF THE UNITED STATES WITH CUBA.

MERCHANDISE.

YEAR.	CUBA.		
	EXPORTS.	IMPORTS.	
		Free.	Dutiable.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Total, 1851-1860.....	83,868,091	3,735,367	241,443,689
Total, 1861-1870.....	139,449,271	3,300,101	378,895,063
1871.....	14,200,496	211,638	57,323,287
1872.....	13,168,958	251,623	67,012,792
1873.....	15,231,039	409,614	76,668,111
1874.....	19,597,981	721,854	84,706,243
1875.....	15,586,658	322,778	64,264,939
1876.....	13,746,058	295,864	55,712,002
1877.....	12,748,003	265,682	65,562,713
1878.....	11,365,013	193,103	56,708,229
1879.....	12,294,329	294,933	63,354,723
1880.....	10,924,633	555,627	64,867,391
Total, 1871-1880.....	138,863,168	3,522,716	656,180,430
1881.....	10,999,276	519,390	62,484,014
1882.....	11,775,073	656,042	69,794,610
1883.....	14,567,918	785,829	64,758,705
1884.....	10,562,880	1,484,638	55,696,859
1885.....	8,719,195	1,786,049	40,520,044
1886.....	10,020,879	1,765,751	49,345,029
1887.....	10,138,930	2,033,205	47,482,229
1888.....	9,724,124	2,066,379	47,252,708
1889.....	11,297,198	2,405,425	49,725,198
1890.....	12,669,509	2,761,711	51,039,880
Total, 1881-1890.....	110,474,982	16,264,419	538,099,276
1891.....	11,929,605	26,044,502	35,669,893
1892.....	17,622,411	66,140,835	11,790,836
1893.....	23,604,094	66,049,369	12,657,137
1894.....	19,855,237	67,418,289	8,259,972
1895.....	12,533,260	17,684,765	35,186,494
1896.....	7,312,348	2,074,763	37,942,967
1897.....	7,599,757	1,270,059	17,136,756
Total, 1891-1897.....	100,456,712	246,682,582	158,644,055

TRANSPORTATION NOTES.

COMPILED FROM OFFICIAL SOURCES.

"Subject to change without notice."

RAILROAD FARES.

The through fare from New York to Havana, via the Atlantic Coast Line from New York to Port Tampa, hence by steamer, is \$54.75, first class.

From New York to Port Tampa, \$37.15; to Key West, \$42.50, leaving Cortlandt Street, via the Pennsylvania Railroad.

From New York to New Orleans, first class, \$34.00; second class, \$29.00, via the Pennsylvania Railroad.

From Chicago to New Orleans, first class, \$23.00; second class, \$16.50.

From Chicago to Port Tampa, \$36.20.

From St. Louis to New Orleans, first class, \$18.00; second class, \$12.50.

From St. Louis to Port Tampa, \$33.90.

STEAMERS—(Connecting).

The Plant System's steamers leave Port Tampa Mondays and Thursdays, calling at Key West Tuesdays and Fridays, and arriving at Havana Wednesdays and Saturdays, the fare being \$21.25 from Tampa, and \$11.25 from Key West. These steamers also run from Port Tampa to Santiago de Cuba.

Florida East Coast Co.'s steamers leave Miami, Fla., every Wednesday and Sunday for Havana.

Morgan Line steamers leave New Orleans every Saturday morning, calling at Port Tampa on Mondays, and at Key West on Tuesdays, arriving in Havana on Wednesdays of each week.

Fare from New Orleans, \$36.25, deck passage, \$21.25; from Port Tampa, \$21.25, deck passage, \$11.25; from Key West to Havana the fare is \$11.25, deck passage, \$6.25.

Passengers desiring to travel from New York to New Orleans, thence to Havana, have an opportunity of going directly to New Orleans by sea from Pier 9, N. R., every Saturday at 3 P. M., by the Cromwell Line of steamers, the fare being \$35.00, first class, and \$20.00 steerage. The passage on these steamers occupies from 5½ to 6 days, and passengers can connect at New Orleans with the Morgan Line of steamers to Havana.

NEW YORK TO CUBA BY SEA.

New York and Cuba Mail S. S. Line (Ward Line), leaving New York, foot of Wall Street, twice a week for Havana, Santiago, Guantanamo, Manzanilla, and Cienfuegos.

RAILROAD
FARES FROM
POINTS
IN U. S.CONNECTING
STEAMERSDIRECT TO
CUBA
BY SEA

Fare to Havana, \$40.00; Santiago, Guatanamo, Manzanilla, and Cienfuegos, \$75.00.

Munson S. S. Co., fortnightly for Matanzas, Cárdenas, Sagua la Grande, Caibarien, Nuevitas, Gibara, and Baracoa.

Waydell & Co. steamers for Matanzas, Cárdenas, Sagua la Grande, Caibarien, Guantanamo, Santiago, and Cienfuegos.

NOTE:—Passengers leaving for Florida and Cuba must obtain a health certificate from a private physician or some other person in medical authority, as they are not allowed to enter either Florida or Cuba without it, owing to the present fear of yellow fever in those parts.

STEAMERS FROM CUBA

STEAMERS—CUBA TO OTHER POINTS.

Mail steamship lines leave Havana for Progreso, Vera Cruz, Cienfuegos, Santiago, Havre and Bordeaux, St. Nazaire, and Haiti.

Mail steamship lines leave Santiago de Cuba for Colon, Jamaica, Nassau, in the Bahamas, and to seaports on the northern coast of Cuba.

The Plant Line runs to Port Antonio, Jamaica.

RAILROADS IN CUBA.

PINAR DEL RIO PROVINCE:—A line starts at La Coloma, on the south coast, passing easterly to San Juan, then northeasterly to Pinar del Rio, thence to Havana. Branching off the main line at Palacios (after leaving Pinar del Rio), for Bahia Honda, on the north coast.

HAVANA PROVINCE:—A net of railways connects every point.

RAILROADS IN CUBA

MATANZAS PROVINCE:—A net of railways connects every point.

SANTA CLARA PROVINCE:—A line leaves Las Tunas, on the south coast, for Sancti Spiritus, Santa Clara, running to La Isabella, on the north coast. West of this transverse line is a net of railways connecting every important point.

PUERTO PRINCIPE PROVINCE:—A line leaves Santa Cruz del Sur, on the south coast, for Puerto Principe, thence following a north-northeasterly direction to Nuevitas, on the north coast.

Another line leaves Jucaro, on the south coast for Ciego de Avilla, thence for Moron, terminating at Cienaga, on the north coast.

SANTIAGO LINES

SANTIAGO PROVINCE:—A line leaves Santiago on the southeasterly coast for Bayamo, running north north-west; also, from Santiago to San Luis, running east-northwest.

Another line extends from Jibara, on the north coast south, to Holguin.

A railway line passes from Caimanera, on the south coast to Jamaica, running northerly.

[*From Treasury Department U. S. (Bureau of Statistics), 1898.*]

According to a report published in the Special Consular Reports, "Highways of Commerce," there are ten railway companies in Cuba, the most important being the Ferrocarriles Unidos. Upward of 1,000 miles of main line belong to these companies, and there are besides private branch-lines to all the important sugar estates. The Ferrocarriles Unidos has four lines, connecting Havana with Matanzas, Batabano, Union, and Guanajay. The roads pass through the most populous part of the country, and connect Havana with other lines.

RAILROADS

The Western Railway reached, in 1891, to Puerto de Golpe, 96 miles from Havana, and 10 miles from Pinar del Rio. Since then an English company has acquired it, and the line has been completed to Pinar del Rio, the center of the tobacco-growing district.

The other companies are: Ferrocarriles Cardenas-Jacaro, joining Cardenas and Santa Clara; Ferrocarril de Matanzas, having lines running between Matanzas and Murga, and between Matanzas and Guareiras; Ferrocarril de Sagua la Grande, running between Coucha and Cruces; Ferrocarril Cienfuegos-Santa Clara, connecting those towns; Ferrocarriles Unidos de Caibarien, from Caibarien to Placetas; Ferrocarril de Puerto Principe-Nuevitas; Ferrocarril de Guantanamo.

CARDENAS AND OTHER LINES

The Marianao Railway, only 8½ miles in length, runs from Havana to Marianao, also belongs to an English company.

In 1894 over 750,000 passengers were carried.

TELEGRAPH AND TELEPHONE SYSTEM.

The telegraph system is the property of the government. The telephone system has been farmed out by the government for a limited number of years, to a company called the Red Telefonica de la Havana.

Nearly all public and private buildings in Havana and suburbs are connected by telephone.

TELEGRAPH, TELEPHONE, AND CABLE

CABLES.

The International Ocean Telegraph Company has a line from Havana to Florida.

The Cuban Submarine Company has a line connecting Havana with Santiago and Cienfuegos.

CABLES

The West India and Panama Company has a cable connecting Havana with Santiago, Jamaica, Puerto Rico, the lesser Antilles, and the Isthmus of Panama.

The Compagnie Française de Cables Sous-Marins has a line connecting Havana with Santiago, Haiti, Santo Domingo, Venezuela, and Brazil.

MILEAGE.**MILEAGE**

Postal route, New York to Havana, 1,413 miles.

Distance, New York to Havana, by sea, 1,460 miles.

Railroads, Cuba, 1,075 miles.

Telegraph lines, Cuba, 2,223 miles, 3,327 miles of wire.

Telegraph stations, 167; telegrams, 462,925 per annum.

WEIGHTS AND MEASURES.

Arroba (dry).....25.3664 lbs.

“ (liquid).....4.263 galls.

Caballeria.....32½ or 32¼ acres

Fanega (dry).....1.599 bush.

“ (liquid).....16 galls.

Legua.....2¾ inches

Libra (pound)1.0161 lbs.

Vara.....33.384 inches

**WEIGHTS
AND
MEASURES****METRIC SYSTEM.**

Are (100 sq. meters).....0.2471 acre

Cubic meter.....35.31 feet

Gram..... 15.432 gr.

Hectare (10,000 sq. meters).....2.471 acres

Hectoliter (dry).....2.283 bush.

“ (liquid).....26.417 galls.

Kilogram or Kilo (1,000 grams)..... 2.2046 lbs.

Kilometer (1,000 meters)......621376 miles

Liter.....1.0567 quarts

Meter.....39.37 inches

Quintal (100,000 grams).....220.46 lbs.

CURRENCY.**CURRENCY**

Cuba had, under Spanish rules, no distinctive currency. The peso equalled a dollar, but Spanish, Mexican, and American coins circulated freely. The peso will, under the new administration, be gradually superseded by United States coinage. American and British gold and paper are at a premium. Spanish gold follows next at a premium, then Spanish silver at a premium to paper. The Cuban currency, hitherto,

has been puzzling to strangers, because of constant fluctuations in values.

CURRENCY

TIME.

Standard time varies in Cuba, owing to the extent of the island from east to west through eleven degrees of longitude. Each degree of longitude is equal to 4 minutes of time. This gives the following results :—

When 12 o'clock strikes in Havana, it is 3 minutes past 12 in Matanzas; 5 minutes past 12 in Cárdenas; 9 minutes past 12 in Trinidad and Santa Clara; 11 minutes past 12 in Remedios and Santo Espiritu; 18 minutes past 12 in Puerto Principe; 25 minutes past 12 in Santiago de Cuba; 55 minutes past 11 in Pinar del Rio; and 55 minutes past eleven in San Diego de los Banos.

TIME

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SECTION II.

PUERTO RICO.

HISTORICAL.

DISCOVERY OF THE ISLAND

This island, which the Indians called *Roricüá*, or Borinquen, was discovered by Christopher Columbus in November, 1493, during his second voyage to America.

Captain Juan Ponce de Leon was the first Spaniard to visit the interior of the island. This officer undertook its colonization in 1510, founding the city of Coparro on the site now known as Pueblo-Viejo. About the same time he founded the cities of San German and Aguada.

Some historians have computed the number of inhabitants at the period of the discoverer's visit as 600,000. To-day, so far as is known, none of the inhabitants can boast of descent from those who lived on the island in the day of Columbus.

Little is known of the religion and customs of the natives at this period, but it seems certain that they believed in a beneficent Spirit to whom they attributed all good; and in an evil spirit to whom they accredited every kind of misfortune and wickedness.

Their character was gentle, affable, hospitable, and generous. Theft among them was punished more severely than any other crime. Dancing and wrestling were their principal amusements.

INDIAN RULE

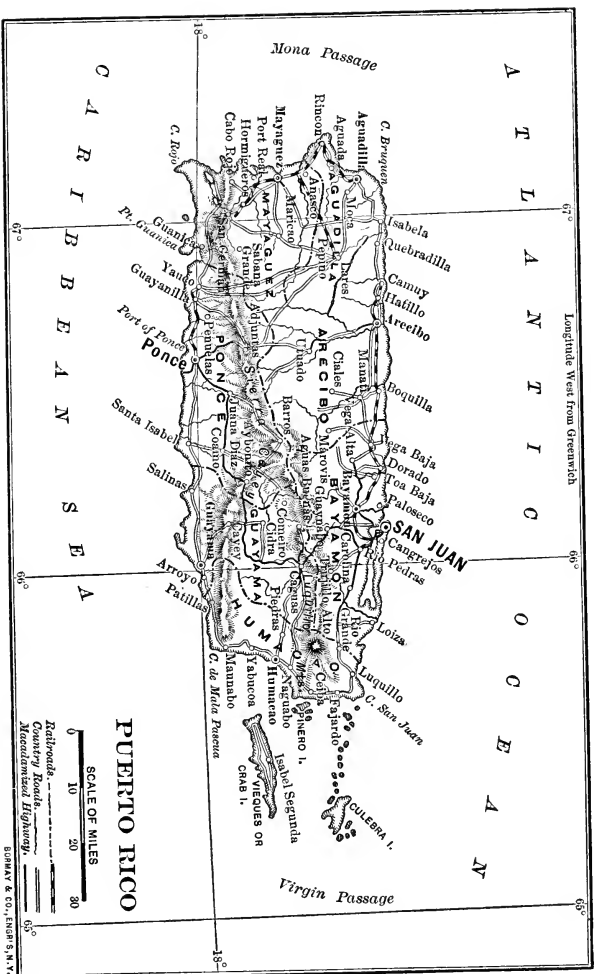
The government was a kind of hereditary monarchy, the chief of which at the arrival of the Spaniards was the Cacique Aqueinaba. These Indians were principally agriculturists. This industry was entirely carried on by women; hunting and fishing being, through preference, the sole occupation of men. The arms of this people were the bow and arrow, and the *macana*, a kind of stone hatchet.

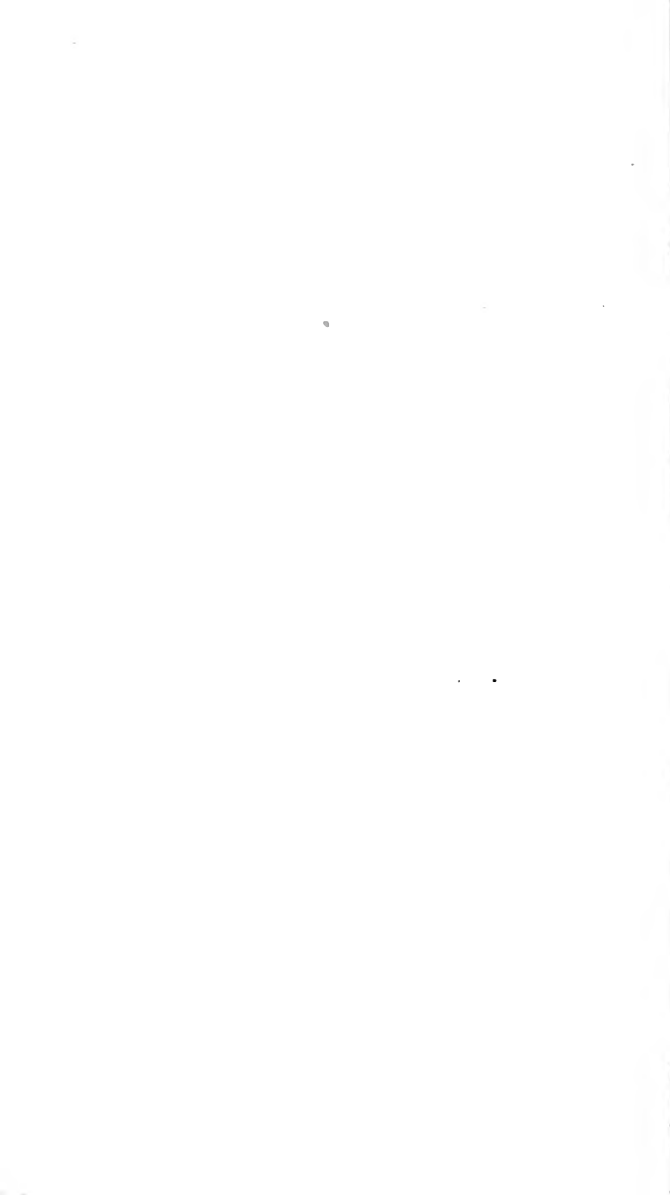
In 1511, the Indians, irritated at finding themselves treated as slaves by Governor Ponce de Leon and his associates, rebelled against the Spaniards. The latter, after several furious encounters, completely routed their opponents on the plain of Yagüaca or Añaxo, and thus made themselves masters of the whole island.

After the death of Ponce de Leon, Puerto Rico was utilized as a transportation colony for convicts.

BRITISH DESTROY SAN JUAN

In 1595, the English adventurer, Drake, penetrated into the harbor of San Juan with a flotilla, sacked the city, and burned the shipping.





In 1598, the Earl of Cumberland took possession of the capital, with the intention of establishing himself therein; but a violent epidemic breaking out among his troops compelled him to relinquish this project. He abandoned the city after ransacking and burning it.

In 1615, a Dutch fleet, commanded by Balduino, entered the port of San Juan, which was then utterly defenseless. He laid siege to the fort of Morro, in which many of the inhabitants and a few Spanish troops had taken refuge.

The besieged, commanded by Capt. Don Juan de Amezuquita, made a sally against the invader, and fought so fiercely that in a short time the Dutch were routed, and their general slain in action at the hands of Amezuquita, a Spanish warrior. In the interior of Morro a monument was raised and still remains in honor of this important victory.

In 1678, the English made another attempt to disembark at Puerto Rico; but a furious hurricane shattered and dispersed the ships, which were compelled to retire.

Twenty-five years later, the English again attacked Puerto Rico, and succeeded in disembarking on the coast of Arecibo, but they were again repulsed with some loss. In 1763 Spain began to take an active interest in the prosperity of the island. The fortifying of San Juan was completed, and other means were taken to protect the inhabitants. Another attack by the English, followed by a repulse, happened in 1797.

In 1815, commerce began to flourish, it being conducted on a generally liberal system; exportations were released from taxation, and a more extended traffic with other countries encouraged and carried out.

A royal ordinance of the same year accorded to every colonist a gratuitous concession of four fanegas and a half of land, on condition of the same being properly cultivated.

Thus, a small proprietorship was inaugurated, and very shortly this system of the appropriation of lands was found to be fairly successful. In addition, the relations between the Puertoricans and the emigrants grew in cordiality.

Merivale wrote: "In twenty years the population of the island was doubled, and for its size it is the most populous part of America."

In 1830, the exportation of sugar was one-half as great as that of Jamaica. In the vicinity of the larger plantations a great number of small proprietors of white race, known as *Hivaros*, cultivated their lands, living with

DEFEAT OF DUTCH INVADERS

BRITISH REPULSED

REIGN OF PROSPERITY

their families and maintaining harmonious intercourse with their colored neighbors.

In 1834, the population of the towns scarcely amounted to 40,000, whilst, on the contrary, that of the rural districts numbered 360,000.

POPULATION INCREASES

An examination of the social and economic constitution of Puerto Rico during the first part of this century suffices to disperse two inveterate and universal prejudices. The healthy progress of Puerto Rico demonstrates, first, that a European population can prosper and multiply beneath tropical conditions such as exist in the Antilles, and, in the second place, that sugar and coffee can be the product of free labor and yield an ample profit and remuneration.

LOYALTY TO SPAIN

Puerto Rico has had, in earlier years, much to contend with in defending herself against the greed of Dutch, English, and Chinese adventurers. Her inhabitants, until the arrival of the United States forces in 1898, when they welcomed the invaders, always distinguished themselves for their loyalty to Spain; never disclaimed their origin, or denied their race. The people of San Domingo failed to seduce them into rebellion when the independence of that island was proclaimed in 1821. Equally futile was the insurrection fomented in Lares in 1868, by foreigners inimical to the ruling race and nation. At that time the people of Puerto Rico defended themselves as one man, and those who would despoil them under the pretext of giving them great liberty were vigorously repulsed and subdued.

TREATY OF COMMERCE

On January 4, 1844, a commercial treaty was arranged between Spain and the United States, the closing stipulation of the agreement being thus summarized by the State Department: "Both governments bind themselves to begin at once negotiations for a complete treaty of commerce and navigation between the United States of America and Puerto Rico."

On December 1, 1883, an industrial exhibition, called the Ponce de Leon Exhibition, was opened at Ponce. A valuable display was made of everything relating to the cultivation and commerce of tobacco. The display of woods produced in the island was as magnificent as it was interesting.

IMMIGRA- TION

Since the treaty of 1844 went into effect, Puerto Rico has steadily advanced, both in external and internal prosperity. The influx of foreigners, however, has not proved to be an unmixed blessing, and the island, of late years, has had its share of undesirable settlers.

By the terms of the Treaty of Peace, signed at Paris on December 10, 1898, Puerto Rico was ceded to the

United States. The island was evacuated by the Spanish troops on October 17, 1898. On the following day the United States flag was raised at San Juan, and the United States came into formal possession of the island.

**OCCUPATION
BY THE
UNITED
STATES**

CATECHISM.

GEOGRAPHICAL.

[For supplementary geographical data, see text following this Catechism.]

What does Puerto Rico signify?

In English, it means "Rich Harbor."

What is the location of Puerto Rico among the great Antilles?

LOCALITY

It is the most easterly

How does Puerto Rico rank with the other Antilles as to size?

It is the fourth of the greater Antilles, coming next after Jamaica.

What is the geographical location of the island?

17° 55' to 18° 30' north latitude, and 65° 39' to 67° 17' west longitude of Greenwich.

Are there many islets and cliffs in the vicinity of Puerto Rico?

Yes; it is surrounded by them.

What are the dependencies of Puerto Rico?

Culebra, Vieques, and Mona, with other islets.

**DEPENDEN-
CIES**

What is the shape of Puerto Rico?

An irregular parallelogram.

What is the configuration of the coast in the north and south?

Precipitous cliffs of great height, rising abruptly from the ocean.

Of what nature is the surface of the island near the coast?

It consists of fertile plains, cliffs, reefs, and lagoons.

Are the waters of the Puerto Rican coast quiet or turbulent?

There is a strong surf on the north coast.

**WATERS
OF THE
COAST**

What is the greatest depth of the Atlantic Ocean immediately to the west of Puerto Rico?

4,700 fathoms.

What body of water separates Puerto Rico from Haiti?

The Mona Passage, which body of water is over 70 miles in width.

How far is the surface of Puerto Rico above the sea level?

**ELEVATION
ABOVE
SEA LEVEL**

From the narrow plains of the coast—which are dry in the south and damp in the north—the land rises to an average height of from 1,500 to 1,800 feet, and in the eastern part of the island reaches its highest point, marked by the El Yungue of the Sierra de Luquillo, 5,000 feet in height.

What is the nature of the surface of Puerto Rico as a whole?

It is mountainous, the average height above sea level being from 1,600 to 2,000 feet.

Is the interior entirely hilly or mountainous?

No; there are several savannahs, or rolling plains, covered with trees and low vegetation.

What is the general appearance of the land slope?

It presents to the view a continual chain of habitations, the land being under good cultivation, with fields of sugar, plantains, coffee, patches of rice, etc.

SURFACE

What is the nature of the land in the vicinity of the mountains?

From their base rich alluvial tracts extend to the sea, and there are numerous well-wooded and abundantly-watered valleys.

Where are the lagoons of Puerto Rico situated?

In the northwest.

In what conspicuous manner is the eastern portion of the island divided from that of the west?

By a range of forest-covered mountains, which do not appear to exceed 4,000 feet.

How many departments are there in Puerto Rico?

**DEPART-
MENTS**

Seven:—Bayamon, near the northeast end of the island; Arecibo; Aquadilla; Mayaguez; Ponce, and Guayama. The island of Vieques (with the town of Isabel Segunda), is attached as an eighth department.

What is the area of Puerto Rico, including Culebra, Culebrita, and Vieques?

3,668 square miles.

What is the length and width of Puerto Rico?

The island is 95 miles long, and 35 miles wide.

How is Puerto Rico bounded?

It lies between the island of Haiti on the west, the Virgin islands, belonging to Denmark, on the east, the island of St. Croix on the east-southeast, and the channel of Mona on the west. **BOUNDARIES**

How far is Puerto Rico from Cuba?

One hundred miles, from coast to coast.

How is Puerto Rico located with reference to other important points?

From New York, 1,500 miles; from Key West and Havana, 1,000 miles; from Cadiz, 3,000 miles; from the Canaries, 2,600 miles.

CLIMATE.**What is the nature of the climate of Puerto Rico?**

It is hot and humid, but not inimical to health, except locally, in the marshy districts, and in cities where sanitation is neglected.

What is the average temperature of Puerto Rico?

**TEMPER-
ATURE**

79°.

What is the maximum of heat in Puerto Rico?

100.8°.

Which month of the year is deemed the healthiest in Puerto Rico?

October.

How many seasons are recognized in Puerto Rico?

SEASONS

Two; the rainy and the dry, the first lasting from July to December, and the latter from January to June, both inclusive.

Does the central longitudinal location of the mountain ranges greatly affect the climate?

Yes, as the hills and mountains intercept the north-east trade winds with their rain clouds, there is sometimes almost a superabundance of moisture in the lowlands of the north, while in the south severe droughts occur, and the land demands artificial irrigation.

What are the usual weather conditions in midwinter?

The days are delightful, differing but little from those of autumn in southern Spain.

What is the length of the longest day?

It scarcely exceeds thirteen hours.

HURRICANES **Which is the most disastrous natural phenomenon of the island?**

The tremendous hurricanes occurring between the months of July and October.

Is there an alternation of land and sea breezes in Puerto Rico?

Yes; the land breeze sets in about 9 o'clock in the morning and continues throughout the day. The sea breeze arises soon after sunset, and continues until an hour after sunrise. The least endurable temperature is during the change.

Do strangers easily become acclimated in Puerto Rico?

Yes, probably more so than in any other part of the West Indies.

Do dangerous fevers prevail?

FEVERS They occur, but are deemed less contagious and less dangerous than in Cuba and San Domingo.

Is yellow fever known in the interior?

No, only on the coasts.

MOUNTAINS, RIVERS, HARBORS.

Which is the highest range of mountains in the West?

The Sierra Cayey, which terminates abruptly on the southern coast, forming a great precipice.

Which is the highest mountain peak?

El Yunque in the Sierra de Luquillo, situated on the northeast. This peak is 3,700 feet high.

What is the character of the valleys?

They are well drained and very fruitful.

Are there any large caves or caverns?

CAVES Yes; notably those of Aguasbuenas and Ciales. The former contains beautiful stalactites and deep indentations which shelter a multitude of bats. The latter exhibits striking examples of hand carving. Apartments have been hewn out, including seats for visitors.

Are there many rivers?

There are fifty small rivers, partly navigable and running to the sea.

Is the harbor accommodation good ?

Yes, there are many excellent harbors, but on the north a strong surf interferes with the usefulness of those in that locality.

**RIVERS,
HARBORS****Which are the principal harbors ?**

San Juan and Arecibo, on the north coast; Aguadilla and Mayaguez, on the west; Ponce (roadstead), Arroyo, and Guayanilla, on the south; and Humacao and Fajardo, on the east.

Which is the principal port and harbor ?

San Juan, having one of the best harbors in the Antilles. It is situated at the western extremity of the island.

What is the situation of San Juan Harbor ?

On the east side is an extensive sand-bank. The entrance is over 2,000 feet wide, and is defended on the west by forts, erected on two small islands. A coral formation prevents large ships from docking.

TRANSPORTATION, TELEGRAPH, ETC. TRANSPORTATION**How many miles of good roadway are there ?**

150 miles.

What is the usual mode of conveyance where the roads are bad ?

On horseback.

How many miles of railroad are there ?

About 137 miles completed, and 170 miles under construction.

Where do the railroads run, and what is their total length ?

From San Juan to Arecibo, also some smaller lines. The total length is 100 miles (1892).

How many miles of telegraph are there ?

There are 470.

**TELEGRAPHS
AND
TELEPHONES****Are there any telephone systems ?**

Yes; at San Juan, Ponce, and Mayaguez.

POPULATION.**What is the distinctive name and what are the leading characteristics of the people ?**

"Puertoriguenos." They are well proportioned and delicately organized. At the same time they lack energy, are slow and indolent, possess vivid imaginations, are vain and inconstant, tho hospitable to strangers, and ardent lovers of liberty. (The foregoing description of characteristics is by an author of the last century.)

NATIVE CHARACTER- ISTICS

Are modern writers generous in their views of native characteristics?

Yes; one affirms that they are "affable, generous, hospitable to a fault, loyal to their sovereign, and will, to the last gasp, defend the island from invasion. The fair sex are sweet and amiable, faithful as wives, loving as sisters, sweethearts, and daughters, ornaments to any society; tasteful in dress, graceful in deportment, and elegant in carriage."

What was the population in 1887 and 1889?

In 1887, 813,987, the number of negroes being 300,000; 1889, 806,708.

What is the proportional population of whites and other races?

White, 56.4 per cent.; Mulattos, 32.8 per cent.; Negroes, 10.8 per cent.

FOREIGN ELEMENT

Among residents of European origin, what countries are prominent?

Spain, Germany, Sweden, Denmark, Russia, and France. There are also a number of Chuetas, or descendants of Moorish Jews from Majorca. Some natives of the Canary islands also reside in Puerto Rico.

From what nations are the small landholders and country laborers descended?

From Spanish stock, largely modified by Indian blood.

Is the present standard of education in Puerto Rico high?

No; in 1880, among 754,313 persons, 553,750 could neither read nor write.

CITIES AND TOWNS.

[For supplementary data on cities and towns, see text following this Catechism.]

CITIES AND TOWNS

How many towns and villages are there?

About sixty.

Which are the leading cities or towns, according to location?

In the north, San Juan and Arecibo; in the west, Mayaguez; in the south, Ponce and Utuado.

Which are the principal cities or towns, according to importance?

San Juan, 26,000; Ponce, 42,000; Mayaguez, 28,000; San German, 20,000.

Is the city of San Juan on the main island?

No; it stands on the island of Morro, and is connected with the main land by a bridge. The city is strongly fortified. There is a large and safe harbor, which is difficult of access for purposes of assault or invasion.

**SAN JUAN
CITY**

Which are the principal buildings in the city of San Juan?

The cathedral, town hall, arsenal, custom houses, and theater.

VEGETABLE KINGDOM.

[For supplementary data, including lists of vegetables, fruits, flowers, trees, etc., with Spanish equivalents, see text following this Catechism.]

What is the nature of the soil?

It is of extraordinary fertility, and adapts itself to all kinds of cultivation.

Which are the principal agricultural products?

Sugar-cane, coffee, tobacco, maize, rice, and cotton.

**AGRICUL-
TURAL
PRODUCTS**

What other agricultural and vegetable products are there?

Corn, bananas, kassaves, batates, yams, coconut, nutmeg, and tropical fruits.

In what part of the island does tobacco flourish?

In the fertile lowlands.

What was the value of tobacco exported in 1891?

\$1,000,000.

Are the conditions for sugar-growing favorable?

Very, owing to the abundance of water, fertility of the soil, and extent of its plains.

**SUGAR
CULTIVATION**

Where does the sugar-cane grow?

In the littoral levels, between the mountains and the sea.

Where are the principal plantations and mills located?

At Loisa, Joa, Baja, and other parts where the soil is so well suited for the industry that top-dressing is almost unknown, and rarely employed.

Has the production of sugar increased of late?

Yes; in 1880 the production did not exceed 50,000 tons yearly. Since that time remunerated employment has taken the place of slave labor, and sugar cultivation has been undertaken upon a much larger scale.

**SUGAR-
CANE**

What is the average annual product of sugar ?

67,000 tons.

What is the average product of sugar-cane per cuerda ?

30 tons.

Is the cultivation of coffee an important industry ?

Yes; it has been greatly developed within recent years, perfect results having been achieved through the enterprise of Corsicans, who have made coffee culture a special study.

At what elevation does coffee thrive best ?

From about 600 to 1,000 feet above the sea level.

What is the average annual product of coffee in Puerto Rico ?

17,000 tons.

**INDIAN
CORN**

Is maize, the true Indian corn, cultivated ?

Yes; also the yucca, or aboriginal "staff of life." Both grow throughout the island.

At what elevation is rice cultivated ?

At nearly all elevations. It is the chief food of many laborers, being what is known as the mountain variety.

In what part of the island are European grains cultivated ?

In the higher regions.

Do bananas and plantains thrive in Puerto Rico ?

Yes; the island is wonderfully prolific in this respect.

FRUITS

What is the aggregate annual product of bananas and coconuts ?

Bananas, 200,000,000; coconuts, 3,000,000.

What is the average life of banana and plantain trees ?

Sixty years, being equally long-lived with the coco-palm. Bananas and plantains bear fruit ten months after planting; the coco-palm produces nuts in six or seven years, and thereafter during the space of an ordinary life, its yield being reckoned at 100 nuts a year.

Is the pineapple grown ?

Yes; it is more general and more reliable than the peach of our north temperate zone.

What do the forests yield?

Mahogany, cedar, dye woods, balsam, resins, and fiber stuffs.

Are gum trees found throughout the island?

Yes; especially the mamey, guaiacum, and copal.

TREES**Of what character is the verdure on the higher hills?**

Varied tropical forest vegetation, including tree-ferns in large quantities. gum trees, and mountain palms.

MINERAL KINGDOM.

[For details concerning minerals including list of names with the Spanish equivalents, see text following this Catechism.]

Is the geological formation of Puerto Rico accurately known?

No; according to the observations of experts, the island contains sandstone, slate, diabose, and felsite.

Among minerals, which are the richest and most plentiful?

Gold, copper, iron, lead, silver, sulphur, coal, and salt.

MINERALS**Are any of these minerals mined?**

No.

What are the mineral products in addition to those mentioned above?

Magnetic iron, Kalspath Spar, Malachite, and fibrous gypsum. These are found in the region of Juneos, which also contains blue copper.

Are there any mines now in operation in Puerto Rico?

Yes, for the production of salt, which is secured from the lagoons on the coast.

SALT MINES**ANIMAL KINGDOM.**

[For details concerning animals, birds, insects, reptiles, etc., including lists of names with Spanish equivalents, see text following this Catechism.]

Are there many mammiferous animals in Puerto Rico?

Some have been imported from Europe, but have not flourished, and are now degenerating.

Is there much pasture land?

Yes, there are great and rich pastures in the north-east and the southeast. They support vast herds of cattle and horses for domestic purposes. These animals are also exported to all parts of the West Indies.

Is Puerto Rico favorable for the breeding of domestic animals ?

Yes; goats, horses, and mules are successfully raised.

**DOMESTIC
ANIMALS**

Is sheep raising a lucrative branch of industry?

Yes; the mountains on the south coast are particularly well adapted to this purpose, the grass being mingled with aromatic plants.

Is the flesh and wool of Puerto Rican sheep superior to that of adjacent islands ?

The flesh is delicious, but the wool degenerates into a kind of hair, similar to that of the goat.

FISHERIES

Do sea fisheries form an important industry ?

Yes.

Are venomous snakes found in Puerto Rico ?

No; and the same may be said of reptiles (except the vampire), and beasts of prey. The island bears no resemblance in this respect to other islands in the Antilles.

FINANCE AND SHIPPING.

[For further details concerning commerce of Puerto Rico, see text and tables following this Catechism.]

What were the total receipts of Puerto Rico during the fiscal year 1893-94 ?

**RECEIPTS
AND
EXPENDI-
TURES**

\$3,903,655.

What were the total expenditures during the fiscal year 1893-4 ?

\$3,879,813; \$1,050,000 of that amount being used for military purposes.

What was the public debt of Puerto Rico in 1893 ?

There was none.

SHIPPING

How many vessels cleared from Puerto Rico in 1895 ?

1,070, with a tonnage of 900,379.

How many vessels entered in Puerto Rico in 1895 ?

1,077, with a tonnage of 1,079,236.

Of the vessels entering Puerto Rico in 1895, how many were from prominent commercial countries ?

Spain, 150; England, 109; Germany, 50; France, 44; Cuba, 171; U. S., 190; British West Indies, 160.

What are the principal articles of import ?

Linen, cotton cloths, shoes, fancy goods, household goods, coal, iron, soap, meat, lard, jerked beef, fish, rice, flour, vegetables, olive oil, wine, cheese, and manufactured tobacco.

Of what nature are the imports from leading nations ?

Those from England include tissues, cottons, rice, and motor machinery. Spain sends alimentary substances, such as wine, flour, rice, and oil. From the U. S. are received various woods, pork, and cereals. France supplies wine, brandy, cereals, and pot herbs. Germany and Italy are not strongly represented in imports at present. From the Argentine Republic is imported a salt meat called tasajo, which is an article in great demand throughout the island.

IMPORTS**What is tasajo ?**

It is a dried, salted meat, prepared in string shape. The natives find it palatable and convenient to carry.

What was the total value of imports in 1895 ?

\$16,155,056, against \$18,316,971 in 1894.

Which of the imports of Puerto Rico showed an increase in 1895 over 1894 ?

Meat, fish, olive oil, and tobacco.

**INCREASED
IMPORTS****Which of the imports of Puerto Rico showed a decrease in 1895 over 1894 ?**

Flour, vegetables, and wine.

What was the total value of imports to Puerto Rico from Cuba in 1895 ?

\$808,283.

What were the quantities of the principal exports from Puerto Rico in 1896 ?

Sugar, 54,205 tons; coffee, 26,655 tons; hides, 169 tons; cattle, 3,178 head; timber, 30 tons; molasses, 14,740 tons; tobacco, 1,039 tons.

What was the total value of domestic exports from the U. S. to Puerto Rico in 1897 ?

\$1,964,850.

**TOTAL
EXPORTS****What was the total value of foreign exports from U. S. to Puerto Rico in 1897 ?**

\$24,038.

What was the value of imports and exports with countries other than Cuba during 1895?

COUNTRIES.	Imports.	Exports.
England	\$1,765,574	\$1,144,555
France	251,984	1,376,087
Germany	1,368,595	1,181,396
Italy	19,619	589,045
Holland	325,301	3,246
Denmark	26,565	236,418
British West Indies	1,709,117	521,649
Danish West Indies	600	40,434
French West Indies	55	62,927

**CHIEF
EXPORTS**

What are the principal articles of export from Puerto Rico?

Sugar, coffee, molasses, honey, cotton, tobacco, horned cattle, horses, raw hides, brandy, woods for construction and dyeing. The fruits exported include oranges, bananas, and pineapples. Coconuts and maize are also exported.

What was the value of exports in 1895?

\$14,629,494, against \$16,015,665 in 1894.

What was the value of exports to Cuba in 1895?

\$3,610,936.

**INCREASED
EXPORTS**

Which of the exports showed an increase in 1895 over 1894?

Sugar and honey.

Which of the exports showed a decrease in 1895 over 1894?

Coffee.

What was the value of dutiable imports to the United States in 1897?

2,079,313.

What was the value of free imports from to the United States in 1897?

\$101,711.

GEOGRAPHICAL NOTES.

CAVES:—On the south, the Cape of Mala Pascua; southwest, Cape Rojo; on the east the jagged Culebra; the rest are mere points or projections. On the southwest, Cape San Francisco, opposite the island of Desecho; the points Jigüero and Cárdenas, which form the bight of Rincón; the point of Algarrobo, which is the southern point of the bight of Mayagüez. More towards the east are the points Matansa and Caballon, between which the coast of Ponce is hollowed out, and a few other of minor importance commence at Cape Bruquen.

CAVES

COASTS:—The eastern coast lies opposite the islands of Basaje, the nearer isles are those of Culebra and Vieques.

On this coast are many points frequented by vessels of the coast (or island traffic). Leaving the Cabeza de San Juan at the extreme northeast of the island, and sailing toward the south, the first port which presents itself is that of Fajardo. This is really no more than a barren coral, guarded by the islets of Obispo, Zancundo, and Rainos, and by a fearful reef which almost unites the two last-named islets.

COASTS

A chain of reefs, starting from the Cabezade San Juan toward the west coast of the Island of Culebra, presents three passes (or openings).

The first is that of Barriles, the second that of Hermanos, and the third that of San Juan. This last is of greater extent, and from this point many small vessels sail for the east coast of the island.

The second pass (or opening) which leads to the port of Fajardo, is situate very near to the east of the Island of Samos, and only separated from it by a canal about a mile and a half in width.

The Piñeros are keys of small elevations, luxuriant in foliage, and are situated between the points of Medio, Mundo, and Piñero, at the eastern extremity of Puerto Rico.

Las Lavanderas (the washerwomen) are steep-sided, but accessible reefs, level with the water, situated at the north coast of the Cape of Piñero.

The Piraguas are islets, rocky and steep-sided, situate to the east of the Lavanderas.

REEFS:—Northwest of Puerto Rico are the reefs Bar riles, and Corcillera; on the south, Palomines, Teocas, and Cucaracha. The most perilous reefs are those of Chinchorros, broken, rocky, and difficult of access.

REEFS
AND BAYS

BAYS:—On the west coast and rather south is the bay of Corona; Boqueron, a large semicircular bay from

which jut the points of Aquila and Cape Roux. On the east coast are the bays of Aguërra, Jobos, del Infierno, and Arroyo, and that of Patillos, between the points, Las Figuras, and Del Viento.

PORTS AND HARBORS

PORTS:—The principal port is that of San Juan de Puerto Rico, and this is one of the best in the whole of the Antilles. It is situate at the western extremity of the island. Others of importance are Fajardo, Esenada-Honda, Jobos, Salinas de Coamo, Guanica, and Puerto Real. Of lesser size are the ports of Aguirre, Jobos, Del Infierno de Arroyo, and Patillos, between the points Las Figuras and Del Viente.

MOUNTAINS:—The little chains which indent the island attain their height on its eastern side at Yunque. The mountains are low, but present, on their slopes, the most luxuriant vegetation.

They include Mount Torito in Caney; Gerdo and Las Tetas de Cerro, in Germán. The sierras of Cayey and Coamo are situate on the east, and on the western sides, towards the north, is the rugged range of the Lares. Between the townships of Barranquitas and Barros, there is a low range bearing the same name.

Le Mata de Plátanos is close to the town of Peñuelas, and la Silla de Guilarte frowns upon the little town of Adjuntas.

VALLEYS

VALLEYS:—Those of Arecibo, Toa, Cayagua or Loisa, which open natural ways of communication to the midst of the little mountains of the interior.

The extensive valley of Toabago is situate on the north coast, fronting the capital. It stretches to the base of the mountains toward the south, and on the east communicates with the valley of Bayano. The valley of Loisa is on the eastern extremity of the island. To the west lies the rich and picturesque valley of Manati.

LOWLANDS (BAJOS):—Rincón, la Perogrina, el Algarrobo, las Perchas, Rodriquez, Mancha de Fuera y de Tierra, and Los Machos Grandes y Chicos.

RIVERS

RIVERS:—There are only two notable streams, south side; the rivers Coamo and Jacaguas or Juan Diaz, both of which discharge on the southern side of the island. Very much more important are the rivers of the west side declivity; the Guanajibo (30 to 35 miles in length), which flows to San German; the river of Añasco (40 to 45 miles), and the river Pepino, which exceeds 25 miles.

On the northern side the Tuna, the Camey, the Arecibo, the Toa, Bayamon, and the Cayagua or Loisa, which encircles, on the west, the little mountains of Luquillo; most of these attain the length of 60 to 65 miles.

The east side presents three small rivers : Farjado, Humacao, and Guayanes.

Few countries of the extent of Puerto Rico are watered by so many streams. Seventeen rivers take their rise in the mountains, cross the valleys of the north coast, and fall into the sea.

Those of Manati, Loisa, Trabajo, and Arecibo are very deep and broad. The rivers Bayamo and Rio Reditas flow into the harbor of the capital, and are navigable for boats. Many of the rivers are only navigable for a short distance, owing to the accumulation of sand. There is a formidable sandbar at the mouth of the Arecibo.

RIVERS

VOLCANIC ACTION.—The volcanic region of Puerto Rico may be described as just without the zone of the devastating current which has caused such disasters to many of the West India islands.

VOLCANIC ACTION

Notwithstanding, some of the small windward sets present unmistakable signs of marked volcanic action. In the years 1786, 1843, and 1887, the sea retired three or four times at some distance from its shore.

PROVINCES AND CITIES.

PROVINCES:—The island, as administered by the late government, constitutes one single province, under the authority of a governor-general. Under the military rule of the United States, a governor has been appointed to administer the affairs of the island. At present there are ten districts, *i. e.*, Aguadillo, Arecibo, Caguas, Guayama, Humacao, Mayagüez, Ponce, Puerto Rico, San German, San Juan.

PROVINCES AND DISTRICTS

CITIES AND TOWNS.*

San Juan, the capital city, is situated on a long and narrow island, separated from the main island at one end by a shallow arm of the sea, over which is a bridge connecting it with the mainland, which runs out at this point in a long sand spit some 9 miles in length, apparently to meet the smaller island; at the other end the island ends in a rugged bluff, or promontory, some hundred feet high and three-fourths of a mile distant from the main island.

SAN JUAN CITY

This promontory is crowned by Morro Castle, the principal fortification of the town.

* Compiled from data furnished the department by consular officers in 1896.

At this end of the island is the entrance to the harbor, with a narrow channel and rocky bottom, so close under the headland that one can almost leap ashore from a passing vessel. The water here is some 30 feet deep. To a mariner unacquainted with the locality, or when a norther is blowing, this entrance is one of difficulty and danger.

SAN JUAN HARBOR

After rounding the bluff one finds a broad and difficult bay, landlocked and with a good depth of water, which is being increased by dredging.

It is by far the best harbor in Puerto Rico, and probably as good a one as can be found in the West Indies. However, it has its drawbacks. Sailing vessels are frequently detained by the northerly winds during the winter months, and even steamers with a draft of over 20 feet are sometimes delayed; but these occasions are rare. When they do occur, the "boca," or entrance to the harbor, is a mass of seething, foaming water, and presents an imposing spectacle. To see steamers of 16 to 18 feet draft enter in a severe norther is a sight to be remembered, as the great waves lift them up and seem about to hurl them forward to destruction. At such times there is need of a staunch vessel, steady nerves, and a captain well acquainted with the channel, as no pilot will venture out.

AREA OF SAN JUAN

The island upon which the city stands is shaped much like an arm and hand; it is about $2\frac{1}{4}$ miles long, and averages less than one-fourth of a mile in width. The greatest width is a little over half a mile in the portion representing the hand, which also contains the major part of the city.

San Juan is a perfect specimen of a walled town, with portcullis, moat, gates, and battlements.

Built over 250 years ago, it is still in good condition and repair.

The walls are picturesque, and represent a stupendous work and cost in themselves.

Inside the walls the city is laid off in regular squares, six parallel streets running in the direction of the length of the island and seven at right angles.

DWELLINGS IN SAN JUAN

The houses are closely and compactly built of brick, usually of two stories, stuccoed on the outside and painted in a variety of colors. The upper floors are occupied by the more respectable people, while the ground floors, almost without exception, are given up to negroes and the poorer class, who crowd one upon another in the most appalling manner.

The population within the walls is estimated at 20,000, and most of it lives on the ground floor. In one small

room, with a flimsy partition, a whole family will reside. The ground floor of the whole town reeks with filth, and conditions are most unsanitary.* In a tropical country, where disease readily prevails, the consequences of such herding may be easily inferred.

There is no running water in the town. The entire population depends upon rain water, caught upon the flat roofs of the buildings and conducted to the cistern, which occupies the greater part of the inner courtyard that is an essential part of Spanish houses the world over, but that here, on account of the crowded conditions, is very small.

WATER SUPPLY

There is no sewerage, except for surface water and sinks, while vaults are in every house and occupy whatever remaining space there may be in the patios not taken up by the cisterns. The risk of contaminating the water is very great, and in dry seasons the supply is entirely exhausted.

Epidemics are frequent, and the town is alive with vermin, fleas, cockroaches, mosquitoes, and dogs.

EPIDEMICS AND PESTS

The streets are wider than in the older part of Havana, and will admit two carriages abreast. The sidewalks are narrow, and in places will accommodate but one person. The pavements are of a composition manufactured in England from slag, pleasant and even, and durable when no heavy strain is brought to bear upon them, but easily broken and unfit for heavy traffic.

The streets are swept once a day by hand and, strange to say, are kept very clean.

From its topographical situation the town should be healthy, but it is not.

The soil under the city is clay mixed with lime, so hard as to be almost like rock. It is consequently impervious to water, and furnishes a good natural drainage.

The trade-winds blow strong and fresh, and through the harbor runs a stream of sea water at a speed of not less than 3 miles an hour.

With these conditions, no contagious diseases, if properly taken care of, could exist; without them, the place would be a veritable plague spot.

ADVAN- TAGEOUS LOCATION

Besides the town within the walls, there are small portions just outside, called the Marina and Puerta de Tierra, containing two or three thousand inhabitants each.

There are also two suburbs, one, San Turce, approached by the only road leading out of the city, and

* It is safe to say that vigorous measures have already been taken to remedy the evils described in this official report.

the other, Cataño, across the bay, reached by ferry. The Marina and the two suburbs are situated on sandy points or spits, and the latter are surrounded by mangrove swamps.

POPULATION

The entire population of the city and suburbs, according to the census of 1887, was 27,000. It is now (1896) estimated at 30,000.

One-half the population consists of negroes and mixed races.

There is but little manufacturing, and it is of small importance. The Standard Oil Company has a small refinery across the bay, in which crude petroleum, brought from the United States, is refined. Matches are made, some brooms, a little soap, and a cheap class of trunks. There are also ice, gas, and electric-light works.

The climate is warm, but for three months of the year agreeable, altho one is subject, from the sudden change, to colds and catarrh.

The natives are particularly susceptible to this class of ailments, and to consumption and bronchitis.

**CITY OF
PONCE**

The city of Ponce is situated on the south coast of the island of Puerto Rico, on a plain, about 2 miles from the seaboard.

It is regularly built—the central part almost exclusively of brick houses, and the suburbs of wood. It is the residence of the military commander and the seat of an official chamber of commerce.

There is an appellate criminal court, besides other courts; two churches—one Protestant, said to be the only one in the Spanish West Indies—two hospitals besides the military hospitals, a home of refuge for the old and poor, a perfectly-equipped fire department, a bank, a theater, three first-class hotels, and gas works. The city has an ice machine, and there are 115 vehicles for public conveyance.

The inhabitants, who number about 15,000, are principally occupied in mercantile pursuits; but carpenters, bricklayers, joiners, tailors, shoemakers, and barbers find good employment.

POPULATION

The department of Ponce counts about 40,000 inhabitants.

The chief occupations of the people are the cultivation of sugar, cocoa, tobacco, and oranges, and the breeding of cattle.

Commercially, Ponce is the second city of importance on the island.

A fine road leads to the port (Playa), where all the import and export trade is transacted.

Playa has about 5,000 inhabitants, and here are situated the custom-house, the office of the captain of the port, and all the consular offices.

The port is spacious, and will hold vessels of 25 feet draft.

The climate, on account of the sea breezes during the day and land breezes at night, is not oppressive, tho warm; and, as water for all purposes, including the fire department, is amply supplied by an aqueduct, it may be said that the city of Ponce is, perhaps, the healthiest place in the whole island.

Mayaguez, the third city in importance of the island, is situated in the west part, facing what is generally known as the "Mona Channel."

Of industries there is little to be said, except that there are three manufactories of chocolate, which is for local consumption.

Sugar, coffee, oranges, pineapples, and coconuts are exported largely—all, except coffee, principally to the United States. Of sugar, the muscovado goes to the United States and the centrifugal to Spain.

Mayaguez is the second port for coffee, the average annual export being 170,000 hundredweight. The quality is of the best, ranging in price with Java and other first-rate brands. The lower grades are sent to Cuba.

About 50,000 bags of flour are imported into this port every year from the United States, out of the 180,000 bags that are consumed in the whole island.

The population is nearly 20,000, the majority white.

The climate is excellent, the temperature never exceeding 90° F.

The city is connected by tram with the neighboring town of Aguadilla, and a railroad is being constructed to Lares, one of the large interior towns.

Aguadilla, the city which is the principal town and the port of the Aguadilla District, in the northwest portion of the island, has 5,000 inhabitants.

Industries in the vicinity consist of the cultivation of sugar-cane, coffee, tobacco, and coconuts, and the distillation of rum from molasses.

In the town are three establishments for preparing coffee for exportation.

The climate is hot, but healthy; there is hardly ever yellow fever.

Arecibo, the town of from 6,000 to 7,000 inhabitants, is situated on the north coast of Puerto Rico, facing the Atlantic Ocean, and some 50 miles distant by rail from San Juan.

TOWN OF PLAYA

MAYAGUEZ CITY

AQUADILLA CITY

TOWN OF ARECIBO

It is similar to all Spanish towns, with a plaza surrounded by the church and other public buildings in the center, the streets running from it in right angles, forming regular squares. The buildings are constructed of wood and brick.

PORT OF ARECIBO

The harbor is poor, being nothing more than an open roadstead exposed to the full force of the ocean, in which vessels during northerly winds can hardly lie in safety. Close inshore, on one side, dangerous reefs stretch, a constant menace to vessels if the anchor does not hold.

Into this harbor empties a narrow and shallow stream called the Rio Grande de Arecibo. Goods are conveyed on this river to and from the town in flat-bottomed boats, with the aid of long poles and by dint of much pushing and patience. At the bar of the river everything is again transferred into lighters, and thence to vessels. It is a tedious and expensive process.

However, Arecibo is quite an important port, and has tributary to it a large district of some 30,000 inhabitants. The want of good roads in the island makes such a place as Arecibo far more important than it would naturally be.

TOWN OF FAJARDO

The town Fajardo, on the east coast of the island, has a population of 8,779, according to the last official statistics (December, 1887).

The port is handsome, with a third-class lighthouse at the entrance at the point called Cabezas de San Juan, and a custom-house open to universal commerce.

The town is about $1\frac{1}{4}$ miles from the bay.

The only important industry of the district is the manufacture of muscovado sugar, to which most of the planters devote themselves.

Shooks, hickory hoops, pine boards, and provisions, come from the United States in considerable quantities.

Sugar and molasses are exported, and occasionally tortoise shell.

The climate is temperate and healthy.

Naguabo (on the eastside) is a small town of only about 2,000 inhabitants, and in the harbor there is another smaller place, called Playa de Naguabo, or Ucares, with about 1,500.

TOWN OF NAGUABO

The capital of the department, Humacao, is 9 miles from Naguabo, and has 4,000 inhabitants, the district comprising more than 15,000.

Arroyo, in the district of Guayama (southeast portion), is a small seaport of about 1,200 inhabitants.

The annual exports to the United States average 7,000 to 10,000 heads of sugar, 2,000 to 5,000 casks of molasses, and 50 to 150 casks and barrels of bay rum.

VIEQUES.

The island of Vieques, situated 13 miles east of Puerto Rico, is 21 miles long and 6 miles wide.

Its land is very fertile and adapted to the cultivation of almost all the fruits and vegetables that grow in the West Indies.

Cattle are raised and sugar cultivated.

It has a population of some 6,000.

The town Isabel Segunda, is on the north, and the port is unsafe in times of northerly wind, like all the anchorages on that side; the few ports on the south are better, the best being Punta Arenas.

Not long ago there were two importing and exporting houses on the island Vieques; but, on account of a long period of drought and the high duties on foreign imported goods, trade has decreased to local consumption only.

All supplies are brought from San Juan, the majority being of American origin.

The climate is fine and may be considered healthy; there have never been any contagious diseases.

ISLAND OF
VIEQUES

ISABEL
SEGUNDA

VEGETABLE, MINERAL, AND ANIMAL
KINGDOMS.

Spanish names with English equivalents.

VEGETABLE KINGDOM—PUERTO RICO.

Agricultural.

Algodon	Cotton.
Arroz.....	Rice (magnificent).
Azúcar.....	Sugar.
Batatas.....	Sweet potatoes.
Café	Coffee.
Coliflor	Cauliflower.
Guisantes común de Europa.	Common peas of Europe.
Maiz (Indigeno).....	Indian corn (Indigenous).
Ñame.....	Yarn.
Platános.....	Plantains.
Tabaco.....	Tobacco.
Yerba de Guinéa.....	Guinea grass.
Yuca	Manioc.

AGRICUL-
TURE

*Trees and woods of construction—Cabinet and dye-
work.*

El abenez.....	Hard ebony wood.
El algarrobo.....	The locust tree.
El algarrobo veteado.....	The striped locust tree.
El bejuco de mono.....	Tall pliable reed.

TREES

TREES

El boj.....	Boxwood.
Cedro oloroso.....	Sandal wood.
El guayabo.....	The guava tree,
El guayacan.....	Holly tree (<i>lignum vitæ</i>).
La higuera.....	The fig tree.
El jigué salvajé.....	The wild indigo tree.
El laurel de llamas.....	The flame tree.
Madera de libano.....	Pencil wood.
La magnolia llamado Mau- ricio.	The magnolia called Mau- rice.
Mirto cerera.....	The wax myrtle.
El nogal.....	The walnut tree.
Palmeras varias.....	Various palm trees.
El roble.....	The oak.
Veteado de coromandel.....	Zebra wood.

Fruits.

FRUITS

La aquacate manteca vegetal dulce.	Vegetable sweet butter nut.
La ananas.....	The pineapple.
El anón.....	Soft custard apple.
Bananas	Bananas.
El guayabo.....	The guava.
Manzanas.....	Apples.
Melon almizclado.....	Muskmelon.
Melon de agua.....	Watermelon.
Nispalos.....	Medlar nuts.
Uvas.....	Grapes.
Zapotes	Zapotilla nut.

Flowers.

FLOWERS

La bougainvilla (indigena)...	The bougainvilla (indige- nous).
El Jasmin, blanco y amarillo.	White and red Jasmine.
La magnolia.....	The magnolia.
Nasturcios veteados.....	Striped nasturtiums.
Pasionaria.....	Passion flower.
Margarita grande.....	Ox-eyed daisy.
Rosas varias.....	Various roses.
El stephanotis.....	Stephanotis.
Etc., etc.....	Etc., etc.

MINERALS.—PUERTO RICO.

MINERALS

Calizas compactas.....	Blue compact limestone.
Carbonada y sulfato de cobra	Carbonate and sulphur of copper.
Espato calizo.....	Spar.
Granitos.....	Granites.
Hornblenda.....	Hornblende.
Indicios de mercurio.....	Indications of mercury

Malaquita.....	Common malachite.
Malaquita azul.....	Mountain blue malachite.
Pirita de hierro.....	Iron pyrites.
Pizarra	Slate.
Plomo.....	Lead.
Salinas naturales.....	Natural salts.
Serpentina fibrosa.....	Picrolite.
Sucino, o amber amarillo....	Amber (bright yellow).
Yeso fibroso.....	Fibrous gypsum.

MINERALS

ANIMALS.—PUERTO RICO.

Cavallos	Horses.
Cerdos.....	Pigs, hogs, swine.
La cabra.....	Goat.
El cimarrón, o perro montés;	The mountain, or wild dog;
la única especie de animal	the only species of wild
fiera.	animal in the island.
Ganado vacuno.....	Black cattle (horned).
Ganado vacuno sin cuernos..	Black cattle (hornless).
Mulas.....	Mules.
Perros.....	Common dogs.
Ratones numerosos	Numerous rats.
Teneros.....	Calves.

ANIMALS

BIRDS.—PUERTO RICO.

El alcaravan.....	The bittern.
El alcedon.....	The kingfisher.
Flamencos.....	Flamingoes.
La galareta.....	The widgeon,
La gallareta negra que imita	The black widgeon, which
la voz humana.	imitates the human voice.
La gallina de Guinéa.....	The Guinea fowl.
Garzos.....	Herons.
Patos.....	Ducks.
Pelicanos	Pelicans.
Periquitos	Parroquets.
Ruiseñores	Nightingales.
Tortolas	Turtle-doves.

BIRDS

INSECTS.—PUERTO RICO.

Abejas comunes y pequeños.	Small common bee.
Abejas que producen cera	Bees which produce black
negra, y miel amarillo.	wax, and amber colored
	honey.
Aradores	Harvest bugs.
Comogenes.....	Destructive moths.
Cucuyos	Large fire-fleas.
Grillos luminosos.....	Luminous crickets.
Hormigas, blancas y rojas...	Ants, white and red.

INSECTS

INSECTS

Lucernas	Glow-worms.
Mariposas numerosas.....	Numerous butterflies.
Mosquitos	Mosquitos.
Murciélagos vespertillos	Common night bat.
Murciélagos sangradores.....	Blood sucking bat.
La Nigua (peligrosa).....	Chigoe (dangerous).

FISH.—PUERTO RICO.**FISH**

Anchoas	Anchovies.
Pargo.....	Pargo (native name).
Pez sierra.....	Saw fish.
Manaties.....	Manatees.
Múrce (escaso).....	Tyrian purple fish (rare).
Róbalos.....	A kind of bream.
Sábalos	Shad.
Sardinas.....	Sardines.
Tiburones numerosos.....	Numerous sharks.
Tortugas.....	Tortoises,
And many others with solely native names.	

TRANSPORTATION NOTES.

The Red "D" Line of steamers leave Brooklyn, Robert's Stores, fortnightly, for San Juan and Ponce. Fare, first class, \$60; second class, \$35.

Plant Line of steamers leave Port Tampa for Puerto Rico (San Juan).

Quebec Steamship Co.'s vessels leave pier 47, North River, New York, at intervals, for Puerto Rico via Bermuda. Fare, first class, \$30, and upwards.

One of the main features, important to travelers, is the advantageous connections they are able to make from Puerto Rico to St. Thomas, both from San Juan and Ponce. St. Thomas is one of the leading seaports of the West Indies, separated, on the east of Puerto Rico,

STEAMERS

Steamers leave St. Thomas regularly for Hamburg, Genoa, Havre, Bordeaux, Barbados, La Guaira, and Liverpool.

There are direct steamer lines running from San Juan to Geestemünde, Barcelona, and Jamaica, connecting with Santiago de Cuba.

From Ponce two direct mail lines leave for Colon and Barranquilla.

In addition to the above, the following steamer connections are made from the island of Puerto Rico:

San Juan to Puerto Plata (north of Haiti), Havana, Santander, Vera Cruz, Cadiz, St. Thomas, Ponce, Arecibo, Aguadilla; Ponce to La Guaira, St. Thomas, St. Barbara de Samaná (Haiti), St. Domingo; Aguadilla to Mayaguez, Arecibo, St. Thomas; Mayaguez to La Guaira.

COMMERCE.

The trade of the United States with Puerto Rico during the last seven years, as given by the United States Treasury, was:

DESCRIPTION.	1891	1892	1893	1894	1895	1896	1897
Imports:	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Free.....	1,856,955	3,236,337	3,994,673	3,126,895	375,864	48,608	101,711
Dutiable.....	1,307,155	11,670	13,950	8,739	1,131,749	2,248,045	2,079,313
Total.....	3,164,110	3,248,007	4,008,623	3,135,634	1,506,512	2,296,653	2,181,024
Exports:							
Domestic.....	2,112,334	2,808,631	2,502,788	2,705,646	1,820,203	2,080,400	1,964,850
Foreign.....	42,900	47,372	7,819	14,862	13,341	21,694	24,038
Total.....	2,155,234	2,856,003	2,510,607	2,720,508	1,833,544	2,102,094	1,988,888

The commerce of Spain with Puerto Rico from 1891 to 1896 was:

DESCRIPTION.	1891	1892	1893	1894	1895	1896
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Imports from Puerto Rico.....	3,260,650	4,428,891	4,108,654	4,164,964	5,824,694	5,423,760
Exports to Puerto Rico.....	3,305,243	3,929,186	4,653,023	5,535,027	8,572,549	7,328,880

The figures for 1896 are from a British foreign office report (Annual Series, No. 2065, 1896).

The trade of Puerto Rico with other countries of importance in 1895 (according to the Estadística General del Comercio Exterior) was:

COUNTRY.	Imports.	Exports.	COUNTRY.	Imports.	Exports.
	<i>Dollars.</i>	<i>Dollars.</i>		<i>Dollars.</i>	<i>Dollars.</i>
Cuba.....	808,283	3,610,936	Holland.....	325,301	3,245
England.....	1,765,574	1,144,555	Denmark.....	26,565	236,418
France.....	251,984	1,376,087	British West Indies.....	1,709,117	521,649
Germany.....	1,398,395	1,181,396	Danish West Indies.....	600	40,434
Italy.....	19,619	580,045	French West Indies.....	55	62,927

The British consul says that the principal exports in 1896 were :

ARTICLES.	Quantity.	ARTICLES.	Quantity.
Sugar.....	54,205 tons..	Timber.....	30 tons..
Coffee.....	26,655 tons..	Molasses.....	14,740 tons..
Hides.....	169 tons..	Tobacco.....	1,039 tons..
Cattle.....	3,178 head..		

Owing to the troubled state of affairs in Cuba, continues the report, prices for tobacco have increased enormously in Puerto Rico. A large amount has been planted, and the crop promises well.

COMMERCE OF THE UNITED STATES WITH PUERTO RICO.

YEAR.	EXPORTS.	IMPORTS.	
		Free.	Dutiable.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Total, 1851-1860.....	8,856,820	313,869	25,505,957
Total, 1861-1870... ..	21,274,225	45,772	40,224,558
1871.....	3,400,291	11,976	9,440,469
1872.....	2,643,155	26,336	11,301,430
1873.....	1,995,511	448,355	7,530,676
1874.....	2,132,490	1,416,442	5,468,277
1875.....	2,377,757	243,357	6,670,325
1876.....	2,099,076	160,279	4,013,515
1877.....	2,323,944	83,796	4,321,956
1878.....	1,504,931	24,061	4,776,756
1879.....	1,771,503	64,621	4,320,333
1880.....	1,969,284	539,793	4,904,093
Total, 1871-1880.....	22,217,942	3,019,016	62,747,830
1881.....	1,712,732	516,302	3,343,897
1882.....	1,838,214	284,042	5,432,832
1883.....	2,116,499	34,605	5,442,888
1884.....	2,188,609	67,488	6,822,968
1885.....	1,533,177	656,992	5,447,271
1886.....	1,676,929	431,757	4,162,787
1887.....	1,707,241	74,367	4,587,323
1888.....	1,920,358	293,450	4,119,033
1889.....	2,175,458	103,720	3,603,653
1890.....	2,247,700	176,394	3,877,232
Total, 1881-1890.....	19,116,917	2,639,117	46,839,884
1891.....	2,112,334	1,856,955	1,307,155
1892.....	2,808,631	3,236,337	11,670
1893.....	2,502,788	3,994,673	13,950
1894.....	2,705,646	3,126,895	8,739
1895.....	1,820,203	375,364	1,131,148
1896.....	2,080,400	48,608	2,248,045
1897.....	1,964,850	101,711	2,079,313
Total, 1891-1897.....	15,994,852	12,740,543	6,800,020

WEIGHTS AND MEASURES.

WEIGHTS AND MEASURES

For general purposes, the weights and measures of Puerto Rico correspond with those of Cuba (q. v.) Land measurement is calculated by the cuerda, containing 39 ares=30 square miles.

CURRENCY.

"The Spanish government, in 1895," says Frederick A. Ober, "took up all the Mexican and Spanish coins in circulation and substituted special silver coins struck in the mint of Spain for this purpose. They bear on one side the Spanish coat-of-arms and the words 'Isla de Puerto Rico,' and on the other the face of the boy king, and an elaborate inscription in Spanish.

"The largest of these is the Peso, of one hundred centavos, corresponding in appearance with our silver dollars, weighing 385.5 grains, and generally spoken of as a 'dollar.'

CURRENCY

"There are also smaller silver coins of five, ten, twenty, and forty centavos, the twenty centavo piece being known as the 'Peseta,' also copper coins of one and two centavos. . . . They represent little more than their bullion value, the banks and merchants gladly exchanging \$1.75 in this coin for one dollar in our silver or paper, and exchanges being sometimes made at two for one and even higher."

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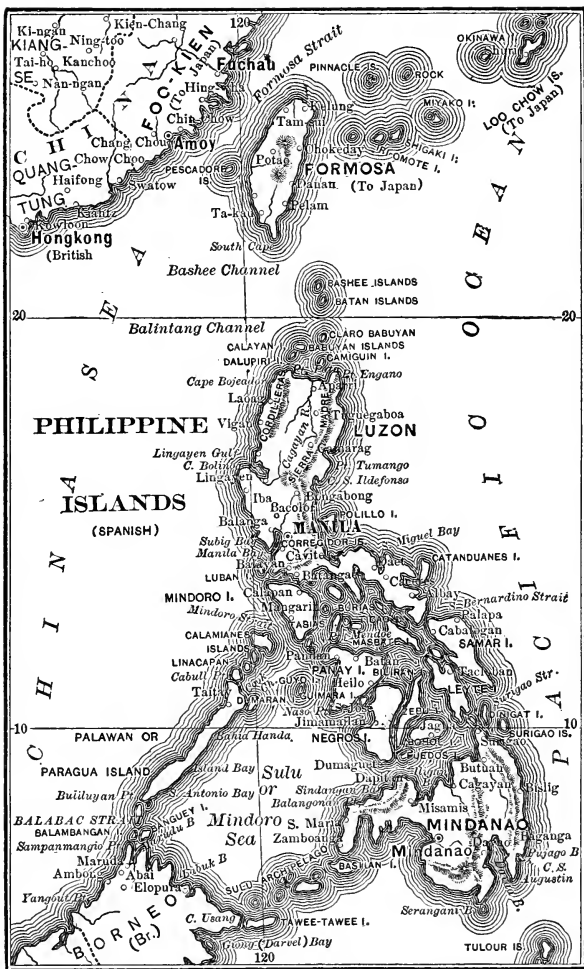
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AUTHORI- TIES CON- SULTED





SECTION III.

THE PHILIPPINES.

HISTORICAL.

The Archipelago of Saint Lazarus, the name originally given to the Philippine Islands, was discovered on March 7, 1521, by Hernando de Magellanes (Magellan), a Portuguese in the service of Spain.

**DISCOVERY
BY
MAGELLAN**

He first landed on the island of Mindanao, and took possession in the name of Charles V., king of Spain. There the first mass was celebrated.

The natives of Mactán, a small island in front of Cebú, however, resisted the Spaniards, and their chief challenged Magellanes to land. The challenge was accepted, and Magellanes with fifty Spaniards landed on the island.

**MAGELLAN
KILLED**

They were attacked by Indians, who numbered about two thousand. After a furious encounter, Magellanes, on August 26, 1521, was wounded by an arrow, and died on the field with six of his companions.

Charles V., elated by the success of the first expedition, despatched a second from Coruña in June, 1524. This was commanded by a friar who was also military knight of the order of St. John, Don Garcia de Loaisa. The captain of one of his ships was the celebrated Sebastián del Cano, another was Andreas de Urdaneta, who later took the habit of the Augustine Order and acted as a guide to the expedition which Legaspi conducted to the Philippines.

This expedition encountered many vicissitudes. On the entrance of the armada into southern seas, a violent hurricane dispersed the ships. To add to their discomfort, their commander died; and according to instructions from Charles V., Sebastián de Cano succeeded him. He only survived his predecessor a short time, and Don Alonso de Salazar was elected to the command.

**SECOND
EXPEDITION
FROM SPAIN**

On the 8th of October the expedition arrived at the Archipelago, which was now called Philippine in honor of the son of Charles V. During the voyage Captain Salazar died, and subsequently, driven by violent winds, the expedition found itself in Tidore, an island of the Moluccas, on the 31st of December, 1526. There the Spaniards had to maintain a protracted warfare against

the Portuguese and the chief of Tidor, meeting with only partial success.

THIRD SPANISH EXPEDITION

Notwithstanding these adversities the king of Spain sent out a third expedition. This was placed under the orders of Hernán Cortéz. It sailed from an American port on the 13th of October, 1527, Captain A. de Saavedra commanding.

Soon two of the ships were lost, but Saavedra touched at the Marianas (already discovered by Magellanes), and from that time the expedition had to maintain a series of running fights with Portuguese and various natives. Many disasters occurred on sea and land, with some disease and many deaths.

Out of the one hundred and ten men who departed on this expedition only ten lived to arrive at Lisbon; the famous Urdañete was one of these.

In spite of so many losses, sacrifice of life, and general disaster, a fourth expedition was despatched on the 1st of November, 1542. This was under the command of Don Lopéz de Villalobos, a man of letters and a doctor of laws, who received strict orders that under no pretence whatever was he to go near the Moluccas.

FOURTH SPANISH EXPEDITION

After a tolerably safe voyage he neared the Philippines; a tempest dispersed his ships, and two of the smaller ones foundered. However, he arrived at the island of Leyte with the intention of establishing himself there; but the scarcity of provisions, and other misfortunes, caused him to fall into the power of the Portuguese.

So bitterly did Villalobos take this to heart, that he sickened and died at Amboina, his last moments being comforted by the ministrations of Saint Francis Xavier. The death of this general was the end of the fourth expedition. His remains were taken to Spain in 1549.

FIFTH SPANISH EXPEDITION

Philip II., now reigning, a fifth expedition was organized. Its results were fortunate, and the authority of the Spanish crown was confirmed throughout the Archipelago by General Legaspi and his coadjutor, the Augustine Urdañete, who had acted as pilot on the previous voyages.

A Mexican flotilla made its first conquest in 1565, taking possession of the island of Cebú. In 1569 Legaspé took possession of all the islands in the Archipelago in the name of the crown of Spain, and founded the city of Cebú under the name of Ciudad del Santo Nombre de Dios (The City of God's Holy Name). At this time a small fortified Malay town stood on the present site of Manila. This was captured and destroyed by 80 Spaniards, under Juan de Salcedo, the nephew of Legaspé,

who founded the city of Manila, of which he took possession on the 19th of May, 1571. Legaspi died on the 20th of August, 1572, and was succeeded in the government by Don Guido de Labazares.

The Spaniards had now to fight successively against Dutch, English, and Chinese adventurers. At this time, the possession of the islands was disputed by a Chinese pirate named Li-ma-hong, who had been outlawed by the Celestial emperor for many depredations committed on the coasts of his own country.

In 1574, Li-ma-hong captured a Chinese junk from Manila, and learning the situation of the Spaniards there, he resolved to attack them. One or two desperate engagements ensued, but in the end the pirate fleet was compelled to withdraw, their Japanese lieutenant, Sioco, being slain in the final battle.

This was the greatest trial the Spaniards had experienced in their new conquests, as the event gave rise to several outbreaks among their own Indians. Li-ma-hong, however, after four months of desultory warfare, was finally subdued.

During the 17th century the most important events which took place were the successful combats, in 1602, of the governor, Don Pedro Bravo de Acuña, against the Moorish pirates of Mindanao, and the repression of a Chinese rebellion, in which 23,000 Celestials were exterminated. This governor also conquered the Moluccas.

In 1609 the Dutch attacked Manila, and attempted to blockade the port. Governor De Silva and his forces made so valiant a defense that the aggressors were put to flight. Subsequently, De Silva assaulted his Dutch enemies in their own possessions in Malacca. In one of these expeditions he died, 19th of April, 1616.

At the end of this year the Dutch bombarded Iloilo, but they were repulsed with loss. In 1618, another attempt was made by the Dutch; this was defeated with the same result. In 1626, the governor, Don Fernando de Silva, despatched an expedition to Formosa, took possession of that island and fortified another port. His letter to the king of Spain, announcing this capture, is still extant.

In 1643, the island of Formosa surrendered to the Dutch, who, in their turn, were dislodged by the Chinese pirate, Cong-Sing, who established an empire in Formosa, which ended with his life.

On the 4th of January, 1641, a terrible volcanic eruption took place; three volcanoes exploded in the north of the island of Luzon, and the greater part of the archipelago was covered by a dense cloud of lava ashes.

ATTACKS BY ADVENTURERS

FIGHTS WITH PIRATES

DEFEAT OF DUTCH

In 1645, the University of Manila was founded. In 1663, the Jesuit, Father Sanvitores, effected some important reforms in the Marianas, which islands had been entirely neglected since their conquest by Legaspi.

UNIVERSITY FOUNDED

The years 1721 and 1729 were times of great trouble, owing to the constant incursions of pirates from the island Iol6. Sanguinary engagements took place, and with varying success on either side.

Between 1729 and 1762 the affairs of the Spanish colony were in a flourishing condition; commerce was carried on with the Moluccas, Borneo, some parts of Hindostan, Malacca, Siam, etc.—in fact, with all parts comprehended between the Isthmus of Suez and Bering Strait.

In 1740, an English war-ship, the *Centurion*, seized the Spanish war-ship *Covadonga* in the Straits of San Bernardino.

MOORISH RAVAGES

In 1754, the greatest irruption of the Moors took place that had hitherto been known. These barbarians ravaged the whole of the islands, and committed atrocious vandalisms.

At the end of 1762 an English squadron, under the command of Admiral Cornish, took possession of Manila; but the heroism of the governor, Simon de Anda y Salazar, compelled the enemy to remain almost blockaded in the capital until a peace, signed in 1763, obliged the invaders to evacuate the island March 17, 1764.

PROSPERITY UNDER ANDA

Governor Anda pacified the islands, restored the public treasury, established a tribunal of commerce, and contributed greatly to the welfare of the archipelago. His inherent hatred of the Chinese, however, led him to the execution of harsh and even cruel measures toward them.

In 1787, Don José de Basco y Vargas was appointed governor. He patronized extensively the mechanical arts and agriculture, offering rewards to those who could improve any instrument for cultivating the land, and encouraging various other industries. He founded the Royal Economic Society, assisted the creation of the Philippine Company, established the cultivation of tobacco in Luzon, regulated taxation, and totally cleared the islands of woodland thieves by his famous ordinance promulgated throughout the archipelago.

An earthquake, causing great devastation, occurred in 1796. Severe shocks were subsequently experienced in 1824, 1852, 1860, and 1864.

SUPPRES- SION OF MOORS

The most important events of the present century include the total suppression of the Moors of the south in 1813, and the foundation of the province Abra, which

gave a great impetus to mission work among the Tagals and other natives.

In 1829, Chinese immigration to the Philippines was permitted, under certain restrictions. In 1830, Don Pascual Erite, the governor, caused new roads to be made, organized a reliable mail service, regulated the price of tobacco, and directed a geographical chart of the archipelago to be drawn.

The period between 1835 and 1848 witnessed a series of conflicts with pirates, revolts, volcanic eruptions, and, on numerous occasions, great ravages from dangerous epidemics. On January 19, 1848, a decisive victory was gained over the pirates occupying the island of Balanguingui. In February, 1851, General Urbeztondo conducted a successful expedition against the center of piracy, the Island of Ioló. The terrible sea-robbers of this locality were almost exterminated.

From 1852 to 1862, soldiers from the Philippines, in unison with the French, invaded Cochin China. The entire foreign commerce was restricted to Manila, by law, up to 1858. Since that date the ports of Iloilo, Sual, Zamboanga, and Zebú have been opened. In 1872, a troublesome insurrection broke out in Cavite, but it was speedily quelled.

In 1876, after the full acquisition of the Zoloanese Archipelago, delay on the part of the Spanish government in registering their rights, resulted in a cession to England of that part of the island of Borneo which was a dependency of the Sultan of Ioló.

In 1887, several of the Moorish inhabitants of Mindanao revolted; their objection being to the establishment of military posts in their villages. From 1887 to 1897, internal and external warfare seems to have been the normal condition of the Philippine islands.

At the beginning of hostilities between Spain and the United States, arising out of the Cuban struggle for freedom from Spanish rule, the Asiatic squadron of the United States, under Commodore Dewey, proceeded from Hongkong, a neutral port, to Manila. The squadron reached Manila Bay on the morning of May 1, 1898, and engaged the forts and Spanish squadron under Admiral Montojo. As a result, the Spanish fleet was entirely destroyed after a battle which lasted from sunrise until noon, over 400 Spanish officers and men being killed or wounded. There was no loss of life on the United States vessels, and only 7 were wounded.

By the terms of the Treaty of Peace, signed at Paris on December 10, 1898, the Philippines were ceded to the United States, \$20,000,000 being allowed as compensation.

PERIOD OF CALAMITY

PERIOD OF UNREST

CATECHISM.

GEOGRAPHICAL.

[For supplementary geographical data, see text following this Catechism.]

Where are the Philippine Islands located?**LOCALITY**

Between $5^{\circ} 32'$ and $19^{\circ} 38'$ north latitude and between 117° and 126° east longitude. They form the most westerly group of islands in the Malay archipelago, covering about 1,000 miles north and south, and 600 miles east and west.

How many islands does the Philippine group contain?

Variously estimated from 1,200 to 2,000. Many of them are very small.

What is the nature of the coasts, and are they safe for shipping?**COASTS**

The coast line of all the islands is very irregular and broken, the ocean cutting in and forming many gulfs, bays, isthmuses, and peninsulas. There are many dangerous coral reefs and turbulent currents at different seasons, preventing the close approach of vessels, except at great risk.

What are the surface characteristics of the Philippines?

They are essentially mountainous.

What is the nature of the land of Luzón island?**LUZÓN LAND CHARACTERISTICS**

The far north is partly an alluvial plain; a granite chain forms the germ of the island north of Manila; the southeast peninsula, Camarines, and the south of Luzón are of volcanic origin.

Is the natural drainage of Luzón abundant?

Yes.

How has the archipelago been divided hitherto?

The last division proclaimed 43 provinces, contained in four groups; Luzón, on the north (23 provinces), capital, Manila; Mindanao, on the south (6 provinces), capital, Zamboanga; Valaovan, the third in extent, west central; the fourth, the Pindya islands (14 provinces).

What is the aggregate area of the principal islands?***AREAS**

114,356 square miles (estimated).

* Luzón, Mindanao, Samar, Negros, Palawan, Mindoro, Leyte, Zebu, Bohal, Basilan, Panai, and Masbate, also the Sulu islands.

With what State does the area of the Philippines correspond?

Arizona.

What is the area of Luzón, with its small islands?

41,000 square miles (estimated).

With what State does the area of Luzón agree?

Virginia.

What is the area of Mindanao?

37,500 square miles.

What is the area of the five next largest islands?

Over 10,000 square miles each, or equal in the aggregate to New York State.

What is the distance of the Philippine islands from Spain?

9,465 nautical miles.*

AREA OF
LUZÓN AND
MINDANAO

DISTANCE
FROM
SPAIN

CLIMATE.

Of what nature is the climate?

It is hot and humid.

Are extremes of heat or cold known?

No; the highest temperature is 100°; lowest, 60°.

What is the average temperature at Manila?

80° to 82° in the warmest season (March to June); in the coolest season (December and January); 79°.

Which portion of the year is known as the rainy period?

From June to November.

During which of the months is the rainfall greatest?

August and September.

What is the average rainfall at Manila?

75 to 120 inches per annum.

What is the relative per cent. of humidity?

About 78.

Which is the pleasantest season in the region of Manila?

From November to February. During that period the sky is bright, the atmosphere cool and dry, and the weather in every way delightful.

CLIMATE

SEASONS

* The nautical mile is 1.151 statute miles.

How does the rainy season affect the land on Luzón?

Lakes form periodically. They subsequently flood the land with mire which produces rich soil.

Where are typhoons experienced, and when do they occur?

The northern islands suffer much from them. Those in the south are affected to a less degree. They occur in all months of the year. The most violent prevail during the autumnal equinox.

EPIDEMICS Is there much sickness among the native inhabitants?

Small-pox and other epidemic diseases have frequently done great harm.

Are fever and cholera prevalent?

Yes; they have frequently depopulated entire towns and villages.

MOUNTAINS, RIVERS, AND HARBORS.

What mountain ranges are there?

Luzón contains the largest cordilleras; others, of a secondary type, exist in Mindanao. The islands are crossed by a mountain chain of considerable size. In the north of Luzón the mountains are connected; in the south and southwest they part in fan-like form.

MOUNTAINS Which are the highest peaks?

Apo, in Mindanao, over 9,000 feet; Halson, in Mindoro, over 8,900 feet; and Mayon, in Luzon, over 8,200 feet. The latter is an active volcano, which has been the scene of several eruptions during the present century.

Are extinct and active craters numerous?

Yes; and the islands are subject to frequent and violent earthquakes. Manila is surrounded by three volcanoes, and has suffered repeatedly. It is always in danger.

Are there any rivers of importance in the Philippines?

Yes; as a result of the even formation of the mountain chains, rivers of considerable size have formed. The larger islands contain inland seas, fed by countless streams from the inland hills. Many of them open out into broad estuaries, and frequently coasting vessels of light draft sail to the very foot of the mountains.

RIVERS

Are there many rivers and streams in Luzón?

Yes; the island abounds with them.

Which are the principal rivers of Luzón?

The Cagayán, 200 miles in length; the Aqua Grande, 112 miles; the Abra, 87 miles; the Río Chico, or Pam-panga, 38 miles, and the Pasig, 19 miles.

Which is the most important of these rivers?

The Pasig, having its source in the Lagoa de Bay, and falling into Manila Bay.

What other rivers of note are there in the archipelago?

The Agusan, in Mindanao, 236 miles in length; the Polangui, also in Mindanao, 87 miles, and the Panay, in Panay, 38 miles.

Which is the most notable lake on Luzón?**LAKES**

The Lagoa de Bay, southeast of Manila, with the island of Dalaga.

Which is the strangest natural phenomena on the Island of Luzón?

The Laguna Encantada (enchanted lake), a crater lake in the neighborhood of Manila.

Which are the most notable bays and bights of the island of Luzón?

The Gulf of Lingayes, the Bay of Manila, on the west coast, the Bay of Raygay in the south, and those of Albay and Sorrogon in the southeast.

Are there many good harbors in the Philippines?**HARBORS**

Yes; but they have, hitherto, been closed to foreign commerce, and used chiefly by coastwise navigators.

To which harbors has trade been practically restricted, thus far?

Manila, Iloilo, Cebú, and Sual. Zamboanga, in Mindanao, is also an open port.

Is the Bay of Manila capacious and otherwise valuable?

It is about 120 miles in circumference, with very few dangers to navigation, and is therefore considered one of the finest bays in the world for the use of mariners.

MANILA BAY**Where is the safest anchorage during stormy weather?**

Off Cavite, about 8 miles to the southwest.

Where is Iloilo harbor, and how does it rank?

It is on the island of Panay, near its southeastern extremity, and about 250 miles in a direct line from Manila. In points of importance as a harbor, it is second. Well-protected and naturally good anchorage for large vessels is found outside the mouth of the Iloilo river.

ROADS

What is the condition of the streets of Manila and other cities ?

They are unpaved, and in the rainy season unfit for traffic of any kind.

In what condition are the roads at and near Manila and other points ?

The roadbeds are generally fair, and easy to travel during the dry season, and average about 25 feet in width. Some are ditched and graded, but very little paving has been done. In the wet season transportation is almost impossible.

Are there any railroads in use ?

The only railroad communication is between Manila and Dagupan, a distance of 123 miles.

Is there ample telegraph service ?

**RAILROADS
AND
TELEGRAPH
LINES**

In the island of Luzón there are about 1,000 miles of telegraphic wire. The principal line is divided into three sections, starting from the capital, and are denominated northwest, northeast, and south. These lines are again subdivided into parts; a certain number of stations are dependent upon them, and these again are the headquarters of the mail service and letter-carriers.

POPULATION.

What was the population of the Philippines in 1895 ?

7,148,250.

What is the number of Spaniards and other European residents ?

15,000 to 20,000 (estimated).

How many Creoles and half-breeds are included in the population ?

Creoles, 5,000; half-breeds, 25,000 (estimated).

What is the total population of Chinese immigrants ?

65,000 (estimated).

What was the population of the Philippines by groups in 1897 ?

Luzón and neighboring islands, 3,442,941; Mindoro-Masbate group, 125,558; Visayas Islands, 2,181,137; Mindanao, 209,086; Calaminaes and Palawan, 22,386; Sulu Islands with Basilan, 4,015.

**NATIVE
TRIBES**

Does the above include unconquered tribes in the several groups ?

No; it is estimated that there are 1,000,000 persons to be added for this class.

How is the native population divided ?

It consists of fifty-one different tribes, descendants of emigrated Malays. These are divided into the civilized coast inhabitants and the savage mountain tribes.

Which are the most influential and powerful of the native tribes ?

The Visays, inhabiting the southern islands, Iloco, Igorrotes, Pangasina, and the Cagaya.

Who are the people called Indios by the Spaniards ?

THE INDIOS
OR TAGALS

The Tagals, who are most numerous on Luzón and its neighboring islands.

What tribes are found in Luzón, Negros, Mindoro, and Panay ?

The Negrito, Cebú, and Jabla tribes, the supposed descendants of the natives proper.

What are the manners and customs of these tribes ?

They lead a nomadic life, fishing and hunting being their occupation. The costume of the men consists of trousers of cotton or silk, a shirt, and a straw hat. The costume of the women consists of a jacket of cotton, and a skirt, held by a belt. They chew betel.

MANNERS
AND
CUSTOMS

Who were the original inhabitants of the Philippines ?

The Negrito, Cebú, and Jabla.

What has become of these original inhabitants ?

Their descendants still live in the central mountain range, and on the northwest coast of Luzón; on the islands of Negros, Panay Mindoro, and Mindanao. They are rapidly dying out.

What is their approximate number at present ?

30,000 to 35,000.

What is their source of livelihood ?

They, too, are nomads, occupying themselves chiefly with fishing and hunting.

Does the language of various tribes differ ?

Only, as a rule, in idioms.

LANGUAGES

What is the Visaye tribe most noted for ?

Adroitness in making stuffs from the fibers of the pineapple.

What is the Catalangano tribe noted for ?

The construction of excellent boats from the timber of the islands.

**NATIVE
INDUSTRIES**

What is the chief characteristic of the Jagale tribe?

Deftness in carving, which they execute with marvellous skill.

Is there any distinct division in the population of Luzón?

Yes; three. The people are grouped in the three concentric zones of the island.

What are the ordinary industrial pursuits of the islanders?

Plaiting of mats, weaving, and embroideries.

In whose hands is the commerce?

In the hands of British, Americans, Germans, Swiss, and French.

By whom is the coast trade largely carried on?

Jagales and Chinese.

Who controls the largest tracts of land on Luzón?

Religious orders.

**CHINESE
INFLUENCE**

Are the Chinese influential in foreign commerce?

Yes; much of the export and import business must be negotiated through them.

What is the character of the Philippine Malays?

They are superior to many Asiatic peoples, being orderly, amiable, courteous, and honest. They are exceedingly superstitious, and are easily influenced upon profession of Christianity. Their efforts in any direction are intermittent rather than steady; their wants are readily provided for, and they take life easily.

**SPORTS AND
PASTIMES**

Have the natives any recognized pastimes?

They are fond of music, dancing, and all amusements. The passion for gambling is strongly developed; cockfighting is the national sport.

Is there liberal public instruction for children?

Education, especially in the primary grade, is well advanced. In 1889 there were 870 schools for boys and 794 schools for girls. The teachers are furnished from the normal school of Manila.

EDUCATION

The higher education has been given in the college San Juan de Lateran, founded in 1820; also, in the Municipal Athenæum, under the direction of the Jesuits, and in the University of San Tomás de Manila, founded on the 15th of August, 1619.

There are also many private schools. One for the

education of Indian orphans; that of Santa Rosa, founded in 1750, for the education of poor girls, and the municipal school, conducted by the sisters of charity.

How many newspapers are issued in the Philippines?

**NEWS-
PAPERS**

Arrangements are now in progress for the issue of several uncensored newspapers. One only was published in the archipelago under the recent administration. It was controlled by the government.

Has Christianity gained a strong foothold in the Philippines?

It has spread among the coast inhabitants, who were adherents of Islam until the arrival of the Spaniards. The inhabitants of the central islands, South Mindanao, and the interior of Luzón, are as yet unconverted.

To whom is the conversion of the natives due?

RELIGIONS

To the Augustine, Franciscan, Dominican, and Jesuit orders.

Are there many followers of Mohammed on the islands now?

They are numerous on the westerly side of Mindanao and on the Sulu islands.

CITIES AND TOWNS.

[For supplementary data on cities and towns, see text following this Catechism.]

Where is Manila?

**LOCATION OF
MANILA**

On the west side of the island of Luzón, at the mouth of the Rio Pasig and Manila Bay.

How is the city divided geographically?

It lies on both shores of the river, and is connected by means of a stone bridge, 420 feet long, of 10 arches, and an iron suspension bridge.

How is the city divided for military and other purposes?

On the south or left shore of the Pasig is the Ciudad proper, or fort. On the right or north shore are the eight suburbs, of which Bidondo, Santa Cruz, and Tondo are the most important.

What is the general aspect of the Ciudad?

THE CIUDAD

It is a fort of high, black walls, protected by a citadel, and surrounded by broad ditches.

BUILDINGS What important buildings are in the Ciudad?

The palace of the former captain-general, the palace of the archbishop, the majestic cathedral, dating back to the 16th century, the town hall. The Real Audiencia, and the Alcade of the province of Tondo. Then there is the university, the school of commerce, the seamen's school, the citadel with the arsenal, two hospitals, a theater, and schools, churches and convents, which cover one-third of the entire area.

What is the inner aspect of the Ciudad?

It has straight, well-paved streets, with massive but unimposing buildings, lacking life and ornament. An unusual quietness pervades the Ciudad.

What is the aspect of Bidondo, Santa Cruz, and Tondo?

This is the seat of the Tagals, mixed breeds, Chinese, and all other foreigners. It is full of life, and here the commercial center is concentrated in the celebrated Chinese street, "La Escolta."

LA ESCOLTA What is especially attractive in the La Escolta?

The exchanges, the richest stores, and all magazines and factories, and offices of importance.

Of what other importance is this portion of Manila?

The quays and docks are situated here, and trade in all its branches of large and small order is very active.

Of what does the population of the Ciudad consist?

Of Spaniards only (10,000).

What is the general bearing of these people?

They are reserved, quiet, and dignified.

**CHARACTER-
ISTICS OF
CHINESE** What are the leading Chinese characteristics?

They are anxious, active, restless, and industrious.

What particular historical interest is attributed to Manila?

It is, next to Goa, the oldest European settlement in the East Indies.

Of what nature is the suburban country near Manila?

The scenery along the Pasig up to the Lagoa de Bay belongs to the most beautiful and charming in the world.

VEGETABLE KINGDOM.

[For supplementary data, including lists of vegetables, fruits, flowers, trees, etc., with Spanish equivalents, see text following this Catechism.]

Is the vegetation entirely tropical throughout the archipelago?

In the archipelago of Sulu the vegetation is thoroughly equatorial, but this characteristic disappears at Mindanao, altho it remains tropical, with marked variations, until the extreme north of Luzon is reached, where equatorial growths again appear in profusion. In some parts of the Philippines the vegetation partakes of an Alpine character, and yet it alternates with tropical productions. A floral collection of the greatest interest is thus presented.

VEGETATION

Does the soil favor vegetation?

Yes; but agriculture is almost wholly undeveloped. Vegetation is so abundant and rich that the highest mountains are covered with plants and trees which never seem to wither. The arboreal wealth of the islands is also immense, and the Abaca tree is one of the most important factors of commerce.

What are the principal agricultural products of the islands?

Rice, corn, sugar-cane, tobacco, coffee, Manila hemp, and indigo.

AGRICULTURAL
PRODUCTS

What is the principal native food product?

The palem, or rice plant, which is almost the only food of natives and Indians. There are three classes of this cereal: 1, Rice of the mountains; 2, Rice of the plain; and 3, Rice of the water. All grow luxuriantly, and much dexterity is shown in its cultivation and irrigation.

Is rice cultivation a profitable industry?

Yes; there have been years in which a gain of 160 percent. has been secured by cultivators. This cereal is grown throughout the archipelago.

Is sugar extensively cultivated?

Yes; as an industry sugar-growing is second to that of rice. The Philippines produce five sorts of sugar-cane, and the sugar extracted is superior to that of China, Java, or Bengal.

RICE AND
SUGAR

Which provinces produce sugar-cane in abundance?

Negros, Pampangas, Bulacan, Batangas, Laguna, Cebú, Cavite, and Mindanao.

Which is the most valuable article of commerce ?

TOBACCO

Tobacco returns the largest profits. Prior to 1882 the cultivation of this plant was untaxed in the Vieques Islands alone; since then it has been free throughout the archipelago, and one of the weights which kept down the colony and prevented its growth has been removed.

Whence is hemp derived ?

Manila hemp is taken from the abaca, a species of banana tree, which only grows in a warm atmosphere. Its fruit is inedible. Hemp has been exported from the islands since 1831; the annual sale in 1892 amounted to \$25,000,000.

HEMP

In what form is hemp exported ?

As raw material. Occasionally America, England, Spain, and Singapore are able to import the matting and tissues of Manila flax, woven in villages in the interior. The tissues, mixed with the fibers of the *pina*, produce a fine, silky material, of which shirts and handkerchiefs are made.

What was the product of Manila hemp in 1892 ?

According to official statements, 95,016 tons:

Is the growth of indigo general ?

Indigo abounds everywhere in great profusion, and is of unrivalled quality. Pangasinan and La Laguna are notable indigo-producing districts.

COFFEE

Is coffee largely cultivated ?

Its growth is general. The plant abounds in Tayabas, and Calamianes. The coffees of Silang are far-famed, and that of Mindanao is thought, by some, to be superior to the Mocha product.

Is there an abundant growth of cereals ?

Notwithstanding the great fertility of the land, the cultivation of maize and wheat has been greatly neglected. Much flour and grain is, at present, imported from California.

Is there any good reason for this neglect ?

Constant disputes regarding the possession of land, unequal and uncertain taxation, and obstacles to land transportation in some districts, have combined to repress enterprise. Many cereals grow wild on the mountains. They bear the generic name of Cogon.

COTTON

Does cotton flourish ?

Cotton fields exist, but the product is scarce and inferior. The most productive provinces of cotton are those of Batangas, Ilocos, and Cavite.

Is cocoa a product of the Philippines ?**COCOA**

Cocoa occupies a large area of cultivation. The best comes from Cebú, and is as much esteemed as the chocolate of Carracas.

Are the forests extensive ?

Yes; and they are prolific in growth of timber.

Are commercial woods abundant ?

No country in the world can furnish better or more varied specimens. The molave, on account of its impermeability, takes the first rank. It resists time and water for hundreds of years. The tacal is especially serviceable for carpentry and molding. The narra, a kind of red mahogany, furnishes a wood from which large tables and doors can be hewn from one single plane. Black ebony is plentiful.

Are there other trees of value ?

Many, altho naturalists have not, as yet, made any distinct classification of the products of the virgin forests. The valomaria furnishes an exquisite balm; excellent furnace charcoal is yielded by the barinco-corong; the rind of the amboynan bleaches tissues; excellent soap is made of the ashes of its bark; and the bacaoan is a dye-wood which grows in places where there is saltpeter; the splendid dye-wood of Campêché is another valuable product.

**VALUABLE
TIMBER****What is the general character of the flora ?**

It resembles that of Malaysia in its tropical exuberance, and is strongly characterized by the wealth of palms, bananas, lauraceæ, cloves, pepper, allspice, cinnamon, and nutmeg. The Areca-palm has its chief residence in the Philippines.

FLORA**Do fern-trees flourish ?**

Yes, at heights 1,000 feet or more above the level of the sea. They grow in the jungle, where the atmosphere is very damp.

How many kinds of pot plants are there ?

Nearly 4,000, of which 500 are ferns. Nearly one-fourth of these are indigenous to the islands.

How does the orchid rank in variety of form, etc. ?

Next to the fern.

ORCHIDS**Have any of the Philippine plants a medicinal value ?**

Yes; many useful herbs are known to the natives.

Where is the flora most luxuriantly represented?

In the peninsula of Malacca, and the Sunda Islands. A small number are Australian. The "Genres" classes, indigenous to the Philippines, are rare, and are almost always represented by one type. Above 7,000 feet of altitude the vegetation is identical with that of Borneo.

What form of vegetation is peculiar to the borders of the sea?

PALMS

Palm trees; mostly of the class Nipa and Pandanas.

MINERAL KINGDOM.

[For details concerning geological formation and minerals, including list of names with Spanish equivalents, see text following this Catechism.]

Where is gold found?

GOLD

In the island of Luzón, especially in the mountains of Manhulao, Paracale; the mountains of North Camarines, in the province of New Ecija; the mountains of Antimonan, in the province of Tayabas, and above all in the village of Gapan. In Mindanao, and in the villages of Iponan and Pigtao, grains of gold have been found, some of them two ounces in weight and very pure.

What are the leading mineral products?

Coal and iron.

Where is coal found?

COAL

"Hulla," or pit coal, which is plentiful, was first found in the island of Cebú; in the year 1842 it was discovered in Batan, and latterly in the lands of Camarines, in the district of Puranus, in Samar. Some new pits have been opened in the jurisdiction of Compostela, also in the province of Albay, at the extreme south of the Luzón; these have been worked by a society of miners. Coal has also been found on the east coast of the island by Negros, and in the little island of Semerara, at the south of Mindoro.

Is coal mining an important industry?

It was, early in this century, very important, but at present it is reduced to small mines in the province of Bulacan. Two companies are operating the coal mines in Cebú.

Do the islands yield iron?

IRON

It is present in large quantities in many of the islands; that of Luzón excels all the rest in quantity and quality. It contains from 75 to 80 per cent. of pure iron; this equals the iron of Sweden.

Where are the largest iron mines located ?

In Bulacan, the mines of La Laguna and Pampanga; in the province of North Camarines, near Paracale, magnetic iron abounds; this is almost pure.

Is copper found in the Philippines ?

There are valuable veins of copper ore in Mancayan, Suyuc, and other places in the district of Lepanto. Copper has been for many years profitable to the natives of the province, who sell this and other rich metals and minerals to an exploring company, known as Cantabro-Filipina, established in 1862.

COPPER**Are there other copper veins of value ?**

Copper beds have been found in the province of Tayabas, and within the boundaries of Antimonan; also on the coasts of Lupan and Patag, in the bight of Guinobatan, near Mambulao; in the island of Masbate, and in the mountain of Caramisan, in the province of Antique. Copper pyrites exist in the island of Capul.

Are sulphur and brimstone abundant ?

Quantities of brimstone abound in the neighborhood of nearly all volcanoes, especially in the central part of the island of Leyte. These, with antimony, exist also in the province of Zambales.

**SULPHUR;
BRIMSTONE****Is mercury included among the minerals ?**

It is found occasionally in the provinces of Caraga, Capiz, and Albay.

Where is lead known to exist ?

In Cebú, within the boundaries of the province of Consolación.

Among building stones, are marble and granite included ?

The marbles of the island of Romblon are notable, also those of the island of Guimaras, and the mountains of Bataan. There are deposits of granite and other stones for construction in the Sierra of Mari-veles. Jasper and immense quarries of basaltic tufa exist in Guadalupe, and on the left coast of the river Pasig.

**BUILDING
STONES****What minerals are found in large quantities in Luzón ?**

Iron, copper ore, sulphur, and coal.

Were any mines in existence when Spain assumed possession ?

Yes; the copper mines near the Monte Datá, and the gold mines, in the north of Luzón. They were in the hands of the Igorrotes, and were worked by them.

To whom do these mines at present belong?

To Spanish and English stock companies.

**WEALTH OF
IGORROTES**

Have the Igorrotes retained possession of any of these mines?

Yes, they still profit from gold mines to the extent of \$12,500 annually.

How are the Igorrotes mostly employed at present?

They are in the paid service of the Spanish and English mining companies.

Are the long-neglected coal mines on Cebú worked at present?

Yes; two companies are operating them.

Where are the principal mineral springs?

Mineral waters, cold and thermal, abound. Among them are the ferruginous cold springs of Taucalao, in the province of Albay; the ferruginous thermal waters of Pagsangan, in the province of Laguna; as also those of Antipolo (sulphurous), a village situate on the heights of the mountains around Lagoa de Bay.

**MINERAL
WATERS**

Are the springs much frequented?

A precious thermal spring in Pagsangan is much used. It is surrounded by enchanting scenery, and many cures have been attributed to its waters. The sulphurous thermal springs of Los Baños, in the province of Lugon, also enjoy a high reputation. In Batangas, the thermal springs of Gapas, of mixed bicarbonate and nitrogen, are becoming known. Many others have been lately tested by chemical analysis.

ANIMAL KINGDOM.

[For details concerning animals, birds, insects, reptiles, etc., including lists of names with Spanish equivalents, see text following this Catechism.]

What domestic animals have been imported and successfully bred?

**DOMESTIC
ANIMALS**

Horses and cattle. The climate has been found unfavorable for sheep and asses. The horses are ill-looking and diminutive, but strong and serviceable.

What quadrupeds are well-known in the Philippines?

Deer are plentiful in the thickets on all islands. The flesh of these animals is wholesome and nutritious. There are many "caravaos," or buffalo, and wild horses. There are also wild bulls of Spanish breed.

What other animals are plentiful among the islands?

Monkeys, mountain cats, and the "nasiga," a small quadruped making the rat its special prey.

Is the breeding of domestic fowl general?

The raising of ducks is a wide-spread industry.

Where are the largest duck-raising farms located?

On the shores of the Pasig river.

Are land birds and water birds, or water fowl, plentiful?

There are 159 kinds of marine birds, of which 100 are indigenous, and 60 kinds of land birds, of which 6 are indigenous.

Are the Philippines infected with insects?

Mosquitoes swarm in all parts of the archipelago. White ants, found in all districts, are very destructive. They eat through every wood, with the exception of the molave.

Are dangerous reptiles numerous on the islands?

The only dangerous reptiles are crocodiles and serpents. The serpent dajoun-paley, or "dekenpalay,"—so called from its resemblance to a green leaf of the rice plant—is considered to be the most dangerous of its class. Fortunately it is rare, for there is no remedy for its bite. The "boa," or "culebra casera," is also an inhabitant of the Philippines.

What other reptiles are known here?

The islands are unusually well supplied with snakes, no less than 18 kinds of the 25 existing ones being represented. There are few lizards, only 5 kinds of the existing 26 being known. Turtles and untailed amphibians are very numerous.

Is fishing abundant?

Yes; fish abound in the seas, lakes, and rivers.

Where are the pearl and trepang fisheries located?

Near the Sulu Islands.

COMMERCE AND SHIPPING.

[For further details concerning commerce of the Philippines, see text and tables following this Catechism.]

What support was contributed by Spain during the fiscal year 1893-94?

\$4,500,000.

DOMESTIC FOWL

INSECTS

REPTILES

RECEIPTS AND EXPENDITURES

**RECEIPTS
AND EXPEN-
DITURES**

What were the receipts of the Philippines for the fiscal year 1894-95?

\$12,150,000.

What percentage of receipts, 1893-94, was derived from taxation?

50 per cent.; contributed in the shape of direct and indirect taxes.

What were the expenditures of the fiscal year 1894-95?

\$12,130,000.

Of this latter amount what were the expenditures of the War Department?

\$5,800,000.

How did the Philippines suffer under the recent administration?

To a great extent progress was prevented by commercial restrictions. The peasantry were allowed to sell to the Spanish government only, and at set rates. Exports were also under government control. Strangers were not permitted to purchase real estate. There were other restricting causes of a like character. Altho these conditions were somewhat relaxed of late years, and a more liberal tariff took effect in 1871, many causes for non-advancement in prosperity remained in existence until the recent evacuation of the islands. Reorganization in all departments of the government is now in progress.

**RECENT
CONDITIONS**

How many foreign vessels entered Philippine harbors during 1893?

The total number entered at Manila, Iloilo, and Cebú was 359, with a tonnage of 392,373.

Of what nationality were these vessels?

Mostly English. The next were Germans (39 entries).

SHIPPING

What was the tonnage of the German vessels?

37,938.

What was the total value of exports in 1893?

\$30,500,000.

Of what products did the exports of 1893 chiefly consist?

Sugar, Manila hemp, tobacco leaf, cigars and cigarettes, coconuts, coffee, skins, dye-woods, essence of Ilang Ilang, also fibers and gold.

EXPORTS

To what destination is much Philippine sugar and hemp shipped?

England.

Where do the Philippines find their best market for tobacco?

MARKETS

In Spain.

To what country is Philippine timber principally exported?

China.

What is the most important article of export?

Manila hemp.

What was the value of leading exports in 1893?

Hemp, \$12,500,000; sugar, \$16,900,000; tobacco leaf, \$2,380,000; cigars and cigarettes, \$1,600,000.

What products stand next in importance?

Coffee, kopra, sapan wood, pearls, indigo, and tortoise.

What was the total value of imports in 1893?

IMPORTS

\$24,000,000.

Which are the leading imports?

Rice, flour, cotton, hats, umbrellas, petroleum, metal wares, machines, coal, and wines.

From what sources is Philippine commerce chiefly derived?

Foreign; it is largely in the hands of English, American, and German merchants.

Is the coast trade an important factor in commerce?

Yes.

GEOGRAPHICAL NOTES.

ISLANDS:—The principal ones are: Luzón, Mindora, Masbete, Ticao, Catanduanas, Burias, Marinduque, Batanes, Polillo, Panay, Bohol, Leyte, Negros, Cebú, Samar, Mindanao, Basilán, Paragua, Balabac, Buruanga, Calamianes. Each one of the above is surrounded by a more or less number of islands and islets.

ISLANDS

CAVES AND POINTS:—The principal are, Capes Bojeador, Engaño, and San Ildefonso, in Luzón; Points Tinaca or Panquitan, and Cabo San Augustin, in Mindanao.

STRAITS:—The principal straits are those of San Bernardino, between Luzón and the Visayas islands; Basilán, between Mindanao and Celebes; that of Surigao, which separates the Visayas from Mindanao; those of Balabac, which unite the sea of Mindanao with that of China; those of Juanico, between Leyte and Samar; and those of Tanon, between Negros on the west and Cebú on the east.

STRAITS

PORTS:—Manila, Iloilo, Cebú, Sual, and Sambrianga are the chief ports at present.

PORTS

MOUNTAINS:—The ranges are comparatively few. The largest cordilleras are to be found in Luzón; others of a secondary type exist in Mindanao. Volcanic action has exercised great influence in various parts of the archipelago. In the interior of the island of Negros is the volcano Canlaon, or Malapina; in Mindanao, the dangerous volcano Macaturin; in the bight of Albay, on the seashore, is elevated the stupendous cone Mount Mayon, 8,000 feet in height. This is the most notable volcano of the whole archipelago. There are many volcanoes of less importance, including Colasi, in the province of Camarines del Sur, and those of Triga, Buhi, Masaraga, and Paedol, in Albay. The largest of these is the volcano of Taal, in the province of Batangas, and the mountain Mainit (which signifies "hot"), both of which are constantly in eruption.

MOUNTAINS

RIVERS:—The most notable river is the Great River Cagayán, in Luzón; the Agno Grande is a large stream; the Abra, the great river of Pampanga, and that of Pasig. In Mindanao is the river Agusan, or Bulúan. After these the waters of longest course are to be found in the islands of Samar, Panay, and Leyte.

RIVERS

LAKES:—The lakes in the whole of the archipelago are variable, some being permanent, others periodical. The largest lake is that of Bay, which gives name to that of the province of La Laguna, in Luzón. The lagoon of Mindanao is situated in the island of that name, and the lagoons of Lánao, Sapongan, Bulusan, and Lignasan are in Mindanao.

LAKES

GULFS AND BAYS:—The principal are Lingayen, Manila, Tayabas, Sorgogon, Albay, Lagoney, the bay of Lamon in the island of Luzón, the bays of Putnam and Illigan, the gulfs of Sibubquez and Dumaiquilas, the bays of Illana and Sarengani, and the gulf of Davao in the island of Mindanao.

PROVINCES AND CITIES.

The provinces in the island of Luzón are 35 in number. Of these the largest (in population), are: Manila (400,000), Albay (296,000), Pangasinan (295,000), Pampanga (250,000), Bulacan (230,000), Batangas (212,000), Camarines (185,000), Laguna (177,000), Ilocus Sur (172,000). Ilocus Nortes (156,000), and Nueva Elija (155,000). The island of Mindanao embraces 8 provinces, those having the greatest population being Misauris, 113,000, and Surigao, 95,000. There are also 9 provinces on adjacent islands,

**PROVINCES
AND CITIES**

Mindoro having the greatest population (106,000). The Caroline and Palaos Islands are in 2 provinces, and the Visayas contain 11 provinces, including Cebú (504,000), Iloilo (472,000), Leyte (270,000), Bohol (247,000), Negros Occidentales (227,000), and Samar (200,000). The Sultanship of Iolo contains only 1 province (17,000).

Luzón, in the north of the group, contains Manila, the capital of the archipelago.

The city proper is the seat of the administration, the archbishop, and the courts. It has a population of 20,000. Here the Spanish element prevails.

In front of the fort are the suburbs Ermita, Pago, Malate, San Miguel, Santa Cruz, Sampaloe, Quiapo, and Tondo.

It is laid out in straight streets, having many large houses, numerous churches and convents, barracks, and important government buildings.

The houses, owing to frequent earthquakes, are built of wood, the foundations only being of stone. In 1882, a cyclone destroyed half the city in one hour.

There is also a Chamber of Commerce, three English banks, and one Spanish bank.

Nankeen is manufactured at Manila, also carpets and other plaited and woven goods.

Large sugar refineries and machine building are in operation, mostly in the hands of the English.

All shipping and commercial relations of the Philippines concentrate at Manila.

Mindanao, in the south, has for its capital Zamboanga.

Commercial relations are mostly carried on with England, Spain, and China.

There is cable communication between Manila and Hongkong.

In 1892, 273 steamers, with a tonnage of 279,057, and 58 sailing vessels, with a tonnage of 71,196, entered the harbor of Manila.

Large steamers are compelled to anchor 3 miles from the city, at Cavite.

For years the work of deepening the harbor has been carried on, but little progress has been made.

The imports at Manila in 1892 were \$23,817,373; exports, \$27,976,569.

The imports consisted of cotton goods (\$7,135,271), cotton twine (\$1,463,227), iron and iron wares (\$953,103), petroleum (\$860,794), woven goods, silks, wools, paper, coal, copper, rice, wine, umbrellas.

The exports consisted of sugar (\$11,341,014), hemp (\$10,053,322), tobacco (\$2,268,899), cigars (\$1,432,811), ropea (\$1,086,011), coffee (\$634,380), indigo, and coconut oil.

LUZÓN

MANILA

SHIPPING

IMPORTS

VEGETABLE, MINERAL AND ANIMAL KINGDOMS.

Spanish names with English equivalents.

VEGETABLE KINGDOM—PHILIPPINES.

Agricultural.

AGRICULTURAL

Abacá.....	Hemp.
Almaciga.....	Gum mastic.
Añil.....	Indigo.
Arroz.....	Rice.
Caña de azúcar.....	Sugar-cane.
Café.....	Coffee.
Cocoa.....	Cocoa.
Lino.....	Flax.
Mijo.....	Millet.
Nuez moscada.....	Nutmeg.
Nuez vomica.....	Poison nut.
Tabaco.....	Tobacco.

Trees and Woods.

TREES AND WOODS

La àcana.....	Hard red wood.
La banava calantes.....	Philippine cedar.
El braziletto.....	A logwood (dyeing).
La cambogia.....	The gamboge tree (gum).
La palma gomati (el mas es- peso de todos).	The gomati palm (the thickest of palm trees).
La palma Nipa, de que los indigenos extraien el vino Filippino.	The Nipa palm, from which the natives ex- tract Philippine wines, or toddy.
La narra.....	Striped red ebony, or eagle-wood.
El sibucao.....	Excellent logwood (dye- ing).
El somaruba Epicacuana, y muchos otros con nombres indigenos solamente.	The Epicacuana tree, and many others which bear native names only.

Fruits.

FRUITS

Añon.....	Sweet custard apple.
Bananas.....	Bananas.
Cidras.....	Citrons.
Lembey.....	A kind of damson (native).
Limones.....	Lemons.
Mangostanes.....	Mangosteens.
Piñas.....	Pineapples.
Pamplermusas.....	Shaddocks.
Santol (indigeno).....	The wild strawberry (in- digenous).
Tamarindos.....	Tamarinds.

Flowers

La adelfa.....	The oleander.
La agave.....	The flowering aloe.
El agerato.....	Sweet milfoil.
La bougainvilla.....	The bougainvilla.
Convolvulos de todos colores.	Convolvuli of all colors.
Corona real.....	The sunflower.
El flor de la pasion.....	The passion flower.
Jasmin blanco y amarillo....	White and yellow jasmine.
Minutia escaso.....	Sweet William pink.
El stefanotis.....	The stephanotis.

FLOWERS

MINERALS—PHILIPPINES.

Aceite mineral.....	Mineral oil.
Argento	Silver.
Azufre.....	Sulphur.
Carbon en nueve provincias..	Coal (in nine provinces).
Cobre.....	Copper.
Gaz.....	Gas.
Hierro	Iron.
Indicios de mercurio (Leyte).	Indications of mercury (Island Leyte).

MINERALS

Marmól.....	Marble.
Oro (en muchas provincias)..	Gold in many provinces.
Pérlas, en Archipel de Sulu...	Pearls in the Archipelago of Sulu.
Platina.....	Platinum.

ANIMALS—PHILIPPINES.

Caballos pequeños pere fuer- tos	Horses, small but strong.
Ciervos	Deer.
Gacelas.....	Gazelles.
Gatos monteneses, especie de zorro.	Mountain cat, a species of fox.
El jabali.....	Wild boar.
Moños.....	Monkeys.
Mono blanco.....	Pure white monkey.
Musareña	The shrew mouse.

ANIMALS

BIRDS—PHILIPPINES.

La alcaravan.....	The bittern.
El alcedon.....	The kingfisher.
El ave de Paraiso.....	The bird of Paradise.
Cotorros.....	Chattering parrots, or magpies.
Cuervos	Crows.
Flamancos.....	Flamingoes.
La gallareta	The widgeon.
La gallareta negra, que imita la voz humana.	The black widgeon which imitates the human voice.

BIRDS

BIRDS

La gallina de Guinea.....	The Guinea hen.
La gallineta.....	The woodcock.
Las garzas.....	Herons.
Patos.....	Ducks.
Pavos.....	Turkeys.
El pichon de siete colores....	The seven-colored pigeon.
Tortolas, verdes, negras, blancas.	Turtle doves, green, black, and white colored.

INSECTS

INSECTS—PHILIPPINES.

Arañas, grandes y pequeñas.	Spiders, large and small.
Escarabajos, uno llamado <i>visaya</i> , muy estimado como comestible.	Beetles, one of which, called <i>visaya</i> , much esteemed as an article of food.
Hormigas blancas y rojas....	Red and white ants.
La langosta.....	The locust.
Mosquitos	Mosquitoes.
Tabanos.....	Stinging hornets.
Tarantulas.....	Tarantula spider.

FISH

FISH—PHILIPPINES.

Abadejos.....	Codfish.
Almajas	Mussels.
La bica.....	A kind of bream.
El Bonete.....	Striped tunny fish.
Camarones	Shrimps.
Cangregos, grandes y chicos.	Crabs, large and small.
Congrios.....	The Conger eel.
Langostos	Lobsters.
Liles	A kind of anchovy.
La lisa.....	The skate.
Ostras	Oysters.
Ostra de perla.....	The pearl oyster.
Salmonete	The red mullet.
Sardinias ...	Sardines.
Tiburones	Sharks.
Tortugas	Tortoises.
Rayes..	Ray fish.

REPTILES

REPTILES—PHILIPPINES.

La amondita.....	Horned serpent.
El alupong.....	A deadly serpent.
Boa constrictor.....	Boa (scarce).
El balato	Sea slug.
Lagartos	Lizards.
Pitón	Python serpent.
Sanguiguuelas.....	Leeches.
Tortugas.....	Tortoises.

COMMERCE.

TOTAL VALUE OF IMPORTS INTO AND EXPORTS FROM
THE UNITED STATES TO THE PHILIPPINES.

YEAR ENDING—	IMPORTS.		EXPORTS.	
	Free.	Dutiable.	Domestic.	Foreign.
June 30—	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1883.....	69,584	10,006,533	128,834	.....
1884.....	71,005	12,268,526	194,925	.....
1885.....	47,294	7,742,462	169,354	.....
1886.....	82,204	9,484,708	132,937	.....
1887.....	37,423	8,577,407	147,682	.....
1888.....	45,876	10,222,402	165,903	.....
1889.....	35,264	10,557,908	179,647	.....
1890.....	33,158	11,559,468	122,276	488
1891.....	3,087,268	2,079,941	124,572	.....
1892.....	6,239,642	69,011	60,914	.....
1893.....	9,117,170	42,687	154,378	.....
1894.....	6,992,364	15,978	145,466	.....
1895.....	3,657,952	1,073,414	119,255	.....
1896.....	2,599,020	2,383,837	162,341	105
1897.....	3,086,057	1,297,683	94,597	.....

TOTAL VALUES OF IMPORTS INTO AND EXPORTS FROM
THE PHILIPPINE ISLANDS (MANILA, CEBU, AND ILOILO),
BY COUNTRIES, WITH THE PER CENT. FROM THE
UNITED STATES, DURING THE YEAR 1896.

COUNTRIES.	Imports.	Exports.	EXCESS OF—	
			Imports.	Exports.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
United States.....	162,446	4,982,857	.....	4,820,411
United Kingdom....	2,467,090	7,467,500	.....	5,000,410
Germany.....	744,928	223,700	521,228	.....
France.....	1,794,900	1,987,900	.....	193,000
Belgium.....	272,240	45,660	236,580	.....
China.....	103,680	13,770	89,910	.....
Japan (1897).....	98,782	1,387,909	.....	1,289,127
Other countries.....	4,987,184	4,065,704	921,480	.....
Total	10,631,250	20,175,000	.....	9,543,750
Per cent. of U. S....	1.53	24 57	.....	.....

Chemicals, drugs, dyestuffs, and medicinal preparations.....	3,355	9,714	2,164
Cotton, manufactures of.....	13,343	10,204	9,655
Iron and Steel, manufactures of.....	67,837	89,958	45,908
Oils, mineral, refined.....galls..	1,085,500	1,500	2,239
Varnish.....galls..	1,354	24,103	19,540
All other articles.....	19,586		
Total domestic merchandise.....	119,255	162,341	94,597
TOTAL FOREIGN MERCHANDISE.....		105	
Total exports of merchandise.....	119,255	162,446	94,597

a See Dutiable.

b See Free of Duty.

QUANTITIES OF MERCHANDISE EXPORTED FROM THE PHILIPPINES (MANILA, CEBU, AND ILOILO), BY ARTICLES AND COUNTRIES, DURING THE CALENDAR YEAR 1897.

[From United States Commercial Relations, 1896-97.]

ARTICLES.	United States and Canada	United Kingdom	Continent of Europe	China and Japan	Australia	Total 1897	Per cent. of U. S. and Canada	Total 1896
Sugar.....pounds..	342,540	799,548	28,862	2,061,060	.....	3,232,010	10.60	3,671,024
Manila hemp.....bales..	441,673	385,182	22,373	33,730	19,080	902,088	48.97	765,093
Coffee.....tons..	.....	.....	119	17	.....	136	.....	89
Cordage.....pounds..	.....	.....	11	3,819	.....	3,830	.....	3,104
Sapan wood.....do..	.....	.....	.....	67,650	.....	67,650	.....	56,830
Buffalo hides and cuttings.....do..	.....	.....	.....	11,340	.....	11,640	2.56	6,360
Copra.....do..	300	47,614	752,470	1,353	.....	801,437	.....	607,529
Mother-of-pearl shell.....do..	.....	246	136	297	.....	679	.....	204
Gum mastic.....do..	.....	1,910	.....	1,654	.....	3,564	.....	2,758
Indigo.....quintals..	.....	526	.....	127	.....	653	.....	462
Tobacco, leaf.....do..	.....	87,008	253,341	26,351	12	316,712	.....	219,729
Cigars.....M..	2,285	23,090	84,321	81,670	15,550	156,916	1.46	183,667

QUANTITIES OF SUGAR AND HEMP EXPORTED FROM THE
PHILIPPINE ISLANDS TO THE UNITED STATES, THE
UNITED KINGDOM, AND CONTINENTAL EUROPE
FROM 1888 TO 1897 INCLUSIVE.

SUGAR.	United States.	United Kingdom.	Continent of Europe.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1888.....	180,464,206	75,014,228	9,872,865
1889.....	284,654,552	113,143,941	10,923,668
1890.....	133,013,538	85,399,445	8,374,306
1891.....	223,822,798	97,589,883	4,873,620
1892.....	200,732,738	157,479,554	6,466,650
1893.....	172,146,419	210,234,762	9,267,816
1894.....	121,323,662	130,463,243	9,153,178
1895.....	140,663,092	183,078,619	8,418,872
1896.....	174,066,872	122,470,425	7,457,602
1897.....	43,261,182	106,578,638	3,736,305
MANILA HEMP.	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1888.....	246,437	347,854	2,861
1889.....	199,707	322,022	1,239
1890.....	109,726	341,993	1,968
1891.....	132,267	443,142	4,206
1892.....	384,076	357,744	3,354
1893.....	212,463	373,041	3,548
1894.....	387,045	335,372	11,691
1895.....	273,918	493,801	3,981
1896.....	290,327	407,522	2,632
1897.....	417,473	385,182	22,373

TRANSPORTATION NOTES.

Through fare from San Francisco to Manila, via Hong-kong, first class, \$255.00.

STEAMERS.

Occidental and Oriental, and Pacific mail steamers leave San Francisco weekly for Hongkong, via Honolulu, fare, first class, \$225.00.

Japan-America line steamers leave Seattle monthly for Hong-kong, via Honolulu, fares, first class, \$165.00; second class, \$112.00; third class, \$35.00.

Northern Pacific line steamers leave Tacoma, Washington, three times a month for Hongkong, direct, fare, first class, \$160.00.

Canadian Pacific line steamers leave Vancouver, fortnightly, direct, for Hongkong, fare, first class, \$225.00.

There is steamer connection between Manila and Liverpool, Singapore, Columbo, Aden, Suez, Port Said, and Spanish ports, also between Manila and points in Africa, India, China, Japan, and Australia.

There are many steamers plying between Philippine ports, the Carolines, and Mariana Islands.

MILEAGE.

Postal routes, New York to Hongkong, via San Francisco, 10,590 miles.

Distance, San Francisco to Hongkong, via Honolulu, 7,030 miles.

Distance from Hongkong to Manila, 630 miles.

A Cable line exists between Luzón, and Hongkong.

MILEAGE

WEIGHTS AND MEASURES.

Liquids are sold by the English wine gallon of 3.785 liters.

The dry measure is the pico of 63.27 kilograms.

WEIGHTS
AND
MEASURES

CURRENCY.

The archipelago received in 1857 its own silver currency with duro as a standard of 100 centavos, or 160 cuartos at 23.364 gram pure silver, which equals 4.205 mark. Silver pieces are coined for 10, 20, and 50 centavos, also copper coins of smaller values. Spanish coins circulated also.

In Mindanao the gantang of 10 silver pesos is used. The latter of $2\frac{1}{2}$ cangan each, one cangan equaling 180 li, which is 1.6516 mark silver.

Dry goods are sold by the English yard and the Castilian vara.

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SECTION IV.

HAWAII.

HISTORICAL.

DISCOVERY

The Hawaiian islands were discovered by Spanish navigators. In 1542, General Lopez de Villalobos conducted an expedition from New Spain to the Moluccas. Juande Gaytán accompanied it in quality of pilot. In an account of this voyage, written by Gaytán, he mentions some islands called Rey, situated about nine thousand leagues from the Mexican coast.

As the expedition of Villalobos followed closely the latitude of Hawaii, which island is about 9,000 leagues from the coast of Mexico, the supposition becomes strong that these islands of Rey are identical with those denominated Sandwich by Captain Cook.

Nor is this supposition unsupported by credible evidence. Trustworthy dates and documents prove that the Spaniards were the discoverers of the Hawaiian archipelago, and that the discovery took place in the middle of the sixteenth century.

ORIGINAL NAME

The greater number of the maps of the sixteenth, seventeenth, and eighteenth centuries depict these islands with Spanish names, and in the latitude and longitude of Sandwich. The same latitude and longitude are also mentioned in the map of the world of Ortelius, dated 1587.

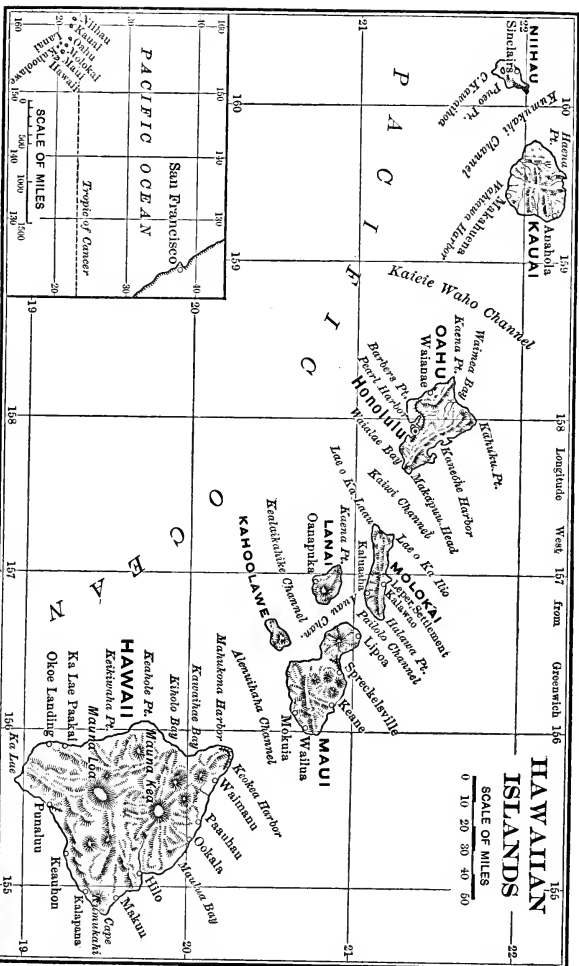
Anson's chart, drawn in 1748, presents a group of islands in the same latitude as the Hawaiian archipelago, but with a difference of 10 degrees of longitude. These and other inedited documents still existing, seem to insist that the first discovery was made by Spaniards.

DE GAYTÁN'S DISCOVERY

Concerning the discoverer, there exists in the Hydrographic Department, Madrid, a curious manuscript map, drawn at the end of the eighteenth century, on which the Sandwich islands are marked with this inscription: "These islands were discovered by Juan de Gaytán in 1555. In this chart they are designated as the islands of Mesa,* which, according to Laperouse, may refer to the island called Hawaii, the mountain of which, Mauna Loa, is in shape of a high table.

It is probable that during the long interval between 1555 to 1778, these islands were known and perhaps casu-

* Spanish : Table ; Table-land.





ally inhabited by sailors of all lands, but as no dates or events exist upon which to hazard even a general review, we must accept the discovery of Captain Cook as the basis of the further history of the country.

In the month of January, 1778, the English ships, *Resolution* and *Discovery*, commanded by Captain Cook, cast anchor in the bay of Uaimea. The navigator made a complete survey of the archipelago, and named it "Sandwich," in honor of an English earl who was also admiral, and a great patron of naval research. Cook then set sail for the coast of North America.

At the end of 1778 he returned to Sandwich, and anchored in a large bay to the south of Hawaii. Here he was received by the natives with almost divine honors, they believing that he was their tutelary god Lona, a visit from whom had been promised them some years previously by one of their prophets.

Owing to circumstances which have never been clearly recounted, Cook and the natives became estranged, till at length open rebellion and quarrels were of frequent occurrence. Some harsh measures on the part of Cook led to a sanguinary collision on the morning of the 14th of February, 1779, in which the illustrious commander lost his life.

Retribution came swiftly at English hands. The natives sued for peace, and gave up the remains of Capt. Cook, having first rendered divine honors to them.

French, English, and North American marines frequently touched at these islands. Among them were Laperouse, in 1786; Dixon, in 1787; Marchand, in 1791, and the celebrated Vancouver, in 1793, the latter succeeding in capturing the affection of the natives, and of their king, Kamehameha.

Interpreting with some inaccuracy the words and intentions of this monarch, Vancouver, on the 21st of February, 1794, declared, in presence of Kamehameha, his chiefs, priests, and others, that the king of England was protector of these islands. This protectorate was merely nominal.

When Cook surveyed the islands in 1779 they were governed by chiefs, or independent petty sovereigns, called alu. Kalaniopun, king, or alu of the territory of Kau, died in 1780. He was succeeded by his son, Kinalo, against whom a revolt was raised by his cousin, Kamehameha. A bloody battle, lasting eight days, ultimately ensued, in which Kiualo was overthrown and slain.

The rebels proclaimed Kamehameha, the ambitious cousin, king, under the title of Kamehameha I., the Conqueror. He merited this distinction, as he at once sub-

CAPTAIN COOK'S VISIT

VAN- COUVER'S VISIT

KAME- HAMEHA "THE CON- QUEROR"

dued all the islands, great and small, to his allegiance. He was a man of clear intelligence, and worked hard to secure the progress of his country, protecting European sailors and American missionaries, and befriending all who might visit the islands in the interests of civilization.

VAN- COUVER'S INFLUENCE

His supreme ambition was to secure the sole dominion of the entire archipelago, but to attain this object he found it imperative to maintain amicable relations with Europeans. On this account he extended a cordial welcome to Vancouver, who, on his part, recognizing the advantage that would accrue to England could she obtain a footing in this magnificent port of the Pacific, offered the monarch every assistance to attain his end.

This conjunction of interests seemed to initiate an apparent vassalage on the part of Kamehameha in relation to the English crown. The result was a consignment of munitions of war, articles of clothing, and various utensils to enable the king to commence his preparations. Vancouver left the island in 1794. Kamehameha at once disciplined troops, organized a small army, and undertook the subjugation of his rivals.

INTRODUC- TION OF REFORMS

Complete conquest was the result, and the Hawaiian king at once proceeded to introduce the elements of culture into his dominions. His favorite residence was Kailua, in the island of Hawaii, but foreseeing the future commercial importance of Honolulu, he removed thence his court and capital. Death suddenly overtook this Hawaiian reformer on the 8th of May, 1819. His last words to his son and successor were: "Hoo kanaka" (be a man). These words are inscribed on the clasp of the Order of Kamehameha I.

Kamehameha II., who abolished idolatry, governed in unison with his father's favorite wife, who, from her energy, tact, and strong character, has been called the Semiramis of the Pacific. She protected the American missionaries, and became, with Kamehameha, a convert to Christianity, which faith was declared to be the religion of the kingdom.

MISSIONARY WORK

In 1823, the king desired to visit Europe. He made the voyage to England, accompanied by his wife, Kamamalu. They had only been a short time in London when they were attacked by measles, of which malady both died. Their remains were conducted to Honolulu by the English frigate *Blonde*.

The king's brother, a minor, born in 1814, succeeded as Kamehameha III., a regent, Kaahumana, for a while conducted the government. Kamehameha III. was the first constitutional monarch. In 1837, he instigated the

banishment of Roman Catholic missionaries, of whom the Methodist missionaries, it is alleged, had become jealous. Before the measure could be carried into effect, a French frigate, commanded by Du Petit Thouars, arrived, and forced the king to withdraw his order.

MISSIONARY TROUBLES

In consequence of this forcible treatment of France, the king was advised to investigate the old agreement with England. It was found that the protectorate of England had been stipulated for in two treaties, but that it had never existed. As a result, the independence of the archipelago was ceremoniously proclaimed.

In 1840 a political code was promulgated, which established some reforms and a regular government. This was mainly effected by Mr. Judd, the physician of the American mission, and by Mr. Wyllie, a Scotchman.

In 1842, Du Petit Thouars appeared again in order to secure further rights for the Catholics, but acted in such a manner that the king began to fear for the independence of Hawaii.

On February 25, 1843, the English occupied the islands, but vacated them again on July 8 of the same year.

A legation was sent in 1844 to London and Washington. It succeeded in receiving the acknowledgment, by England and America, of the independence of the islands and the sovereignty of the king.

TREATY WITH ENGLAND

But already, in February, 1844, and again on March 26, 1846, England made a friendly alliance with the king. This treaty placed all power in the hands of the English, and by its terms the king became a subject of England.

France made a commercial alliance with the king in 1843, but in 1849 a quarrel again ensued. The French Consul Dillon, on arrival of a French frigate and two men-of-war, demanded of the government a lowering of the tariff, equal rights for the missionaries, and the use of the French language in all official correspondence.

The government declined to accede, the French troops landed, took possession of the fort, spiked the guns, and captured the Hawaiian vessels in the harbor. But in consequence of the protests of the American and English consuls the invaders reembarked and left after a few days.

Renewed threatenings on the part of the French, in March, 1851, inclined the king more and more toward the Americans, and under their influence the constitution of Dec. 6, 1852, was established. Eventually the king was determined, upon the advice of the Methodist missionary, Mr. Allen, to incorporate his kingdom with the United States. His death, however, in 1854, arrested this intention.

AMERICAN INFLUENCE

In December, 1854, Kamehameha IV., who was born in 1834, and married in 1856, Miss Emma Rooke, ascended the throne. He cancelled all the arrangements made by his predecessor concerning annexation of the archipelago to the United States, but his reign was a wise and good one, and he won the respect of all nations, including England, which country he visited, in company with his wife.

NEW CON- STITUTION

In 1863, Lot succeeded his brother as Kamehameha V. His first effort was to extend the suffrage. This, at first, met with strong opposition, but the natives, applauding the action of their sovereign, a concession was effected, and in 1864 a new constitution was inaugurated. Kamehameha V. died suddenly in 1872. His dynasty was extinct.

The Chambers elected a new sovereign, William Luna-lilo, a cousin of the deceased king. He was a most popular prince, but a predilection for stimulants induced his death after a reign of two years.

AMERICAN PROTECTION SOUGHT

David Kalakaua, elected by the Parliament on the 12th of February, 1874, now occupied the throne. On the 20th of April, 1875, he determined to place the Hawaiian archipelago under the protection of the United States, and made a journey to Washington in order to confer with president Grant on the subject.

Early in 1875 a treaty was signed assuring a naval station to the American Republic to the exclusion of every other foreign power. King David died on the 20th of February, 1891, and was succeeded by his sister, Lilia Liliuokalani. On the 17th of January, 1893, the monarchy was overthrown and a provisional government was placed in power. By an act, dated July 3d, 1894, the Constitutional Convention appointed Sanford B. Dole president of the Republic of the archipelago of Hawaii.

ANNEXATION TO THE UNITED STATES

On joint resolution of the Congress of the United States, passed by the House of Representatives on June 15, 1898, and by the Senate on July 6, 1898, Hawaii was annexed to the United States.

CATECHISM.

GEOGRAPHICAL.

[For supplementary geographical data, see text following this Catechism.]

What is the geographical location of the Hawaiian, Islands?

LOCALITY

They are situated between 19° and 22° 20' north latitude, and 155° and 160° west longitude.

Has Hawaii any advantages from a naval standpoint?

Yes; it is the great strategic base of the Pacific. Under the present conditions of naval warfare, created by the use of steam as a motive power, Hawaii possesses an immense advantage as a depot for the supply of coal. Possessed of Hawaii, United States is able to advance her line of defense 2,000 miles from the Pacific coast. With a fortified harbor, and a strong fleet at Honolulu, we will be in a position to conduct either defensive or offensive operations in the North Pacific to greater advantage than any other power.

How is Hawaii situated with reference to foreign ports?

**HAWAII AND
FOREIGN
PORTS**

It lies about one-third of the distance on the usual routes from San Francisco to Japanese and Chinese ports, also about the same distance on the routes from San Francisco to Australia, and from ports of British Columbia to Australia, and British India. It lies about halfway of the route from the Isthmus of Panama to Yokohama and Hongkong.

Of how many islands does Hawaii consist?

Of 8 large inhabited and 7 smaller barren islands; the latter being northwest of the former.

By what names are the inhabited islands known?

**NAMES OF
ISLANDS**

Niihau, Kauai, Oahu, Molokai, Maui, Lanai, Kahulau, and Hawaii. Oahu is the most densely populated.

Which island of the Hawaiian group is the most picturesque?

From the anchorage, Lahaina, the capital of Maui, is the most picturesque. As a background to a sea frontage of two miles are mountains reaching to a maximum height of over 6,000 feet. These mountains appear to be riven by precipices thousands of feet in depth. The most perfect view of this magnificent landscape is obtained at sunset.

Which is the most important island of the group ?

Kauai, on the northwest.

Is the island of Kauai easily accessible ?

**ISLAND
OF KAUAI**

As it is cut off from Oahu by the stormy strait of Teiewaho, it is difficult of access in unfavorable weather.

Why is Kauai preeminent among the Hawaiian islands ?

Because it is the oldest, and was the first to receive the benefits of civilization.

Does Kauai present any special attractions to the traveler ?

The fertile and romantic stream Waimea, which rises in the central mountains of the island and flows for miles toward the ocean, is an object of interest to all tourists.

Which is the most important town of Kauai, and for what is it noted ?

Waimea; its harbor, although merely an open roadstead, offers the best anchorage along the shores of the island.

What is the physical conformation of Maui Island ?

**ISLAND
OF MAUI**

It is divided into east and west, the Isthmus of Kula forming a natural unity between the two islands.

What is the small island of Niihau noted for ?

It has rich deposits of guano. Several business houses in Honolulu control the output.

Where is Niihau situated ?

Northwest of Kauai.

What is the origin of the archipelago ?

It is the work of volcanic submarine eruptions.

What is the physical aspect of Hawaii ?

Active and extinct volcanoes, subterranean lakes, and fields of petrified lava.

SURFACE

What is the nature of the surface of the islands ?

Mountainous.

What peculiar aspect is frequently given to the landscape ?

That of snow-covered heights reddened by the fires discharged from the volcanoes. Another strange feature is the presence of fertile and cultivated plains, where rivers and streams are lacking.

Is the natural drainage of the islands good ?

No ; even small rivers are rare. Only on Hawaii Island are there a few navigable for a short distance.

How can the fertility of land without natural drainage be explained ?

**NATURAL
DRAINAGE**

The earth receives nourishment from the humidity caused by heavy dews, and from clouds passing low in these regions.

Is the aspect of the country as pleasing as it is peculiar ?

Yes; the chains of dark rock intermingling with groves of trees and millions of flowers of every shape and hue, form an enchanting contrast to the gray lava which constitutes the soil from which they spring.

Are there many plains on Kauai island ?

Yes, especially on the south side, these latter being favorable for the cultivation of tobacco. The plains of Kauai also yield in great luxuriance the wild cotton tree, which grows in profusion unsurpassed even in tropical lands.

PLAINS

What is remarkable concerning the plains of Waimea ?

They are pierced by subterranean passages, used as places of interment for the dead and hermetically sealed. From these plains a full view is obtained of the summits of three volcanoes.

What is the area of the Hawaiian Islands ?

Variously estimated from 6,640 to 7,400 square miles.

What is the area of each individual island ?

Hawaii, 4,850 sq. m.; Maui, 750; Oahu, 700; Kauai, 780; Molokai, 170; Lanai, 170; Niihau, about 110; Kahoolawe, 40. (All estimated).

With what State does the group agree in point of area ?

The total area of the group agrees most nearly with New Jersey, 7,185 square miles.

CLIMATE

CLIMATE.

How can the climate of Hawaii be best described ?

As perpetual spring. The sky is always cloudless and the atmosphere is clear and serene.

Are the islands healthy for Europeans and Americans ?

Yes.

Are the islands subject to high winds?**WINDS**

The wind called mamuku is periodical. It is a violent gust which blows from the mountains toward the coast.

How do the winds influence the climate of the islands?

The northeast "Passat" blows from March to November, making that period the pleasantest time of the year. In winter occur the south or "sickly winds."

What is a distinct characteristic of the north coast of Hawaii island?

It is subject to strong winds. The periodical wind known as the "Mamuka," in Hawaii, blows with the force of a gale from the mountains.

What is the average and maximum of temperature?

71°; warmest month 89°; coldest month 54°.

How are the seasons divided in the Hawaiian islands?**SEASONS**

From December to March the climate corresponds in many respects to the winter of the temperate zones. The period from May to October is usually considered summer.

Is the annual rainfall heavy?

It varies. At Olaa, Hawaii, windward side, (at elevation of 2,700 feet), 1894-95, the year's rainfall was 176.82 inches; at Kailua, at a lower level, on the leeward side, it was 51.21 inches.

**OUT DOOR
WORK****Is the Hawaiian climate favorable for outdoor work by Americans and Europeans?**

Yes; they can work in the open air at all seasons of the year, as they can not in countries lying in the same latitudes elsewhere.

Must special precautions be taken against the sun?

No; the inhabitants wear straw and soft felt hats similar to those worn in the United States during the summer months.

During what season of the year do gastric fevers appear?

In winter.

What are the principal causes of death among the natives?

Bronchitis, pneumonia, and intemperance in the use of alcoholic stimulants.

What is a prevailing disease in Hawaii ?

Leprosy. There is a settlement in the island of Molokai where all the diseased people are isolated.

LEPROSY**MOUNTAINS, VALLEYS, ETC.****How many volcanoes are existent on the islands ?**

At least forty.

Are they all active ?

No, only two; the others have been extinct for centuries.

On which of the islands are the active volcanoes ?

On the island of Hawaii. The Mauna Loa and the Kilauea rank among the most remarkable of the earth's volcanoes.

How many volcanoes are on this island ?

Five; they rise gradually from the lava plateau to a great height.

Is the lava of active volcanoes noticeable in the country of this island ?

Yes; 13 lava streams flow through the island.

**LAVA
STREAMS****Which is the highest peak of the island ?**

The Mauna-Kea, or "Mother Mountain," 13,803 feet.

What are the principal valleys in the Hawaiian Islands ?

A very remarkable one, called the Wai-lu-ku pass, is situated on the island of Maui. It bisects west Maui, and terminates in a deep gorge in the precincts of Lahaina. The valley of Wai-poi, in Hawaii, is known as the "Eden of the Hawaiian Islands." It is nearly two miles wide at its mouth, and terminates in a grand ravine, richly cultivated, seven miles from the seashore. This valley is crater-like in form.

Are there any notable valleys in Molokai ?

The celebrated valley of Halawa is one of the principal attractions of the island. There may be seen scores of taro beds under cultivation, grass nearly five feet high, and many large cascades leaping from a height of several hundred feet upon the gigantic precipices beneath them.

**VALLEYS
IN MOLOKAI****Are there any drawbacks to travel in this valley ?**

Annoyance is frequently experienced from aggressive spiders. They are of immense size, having feet distended from five to six inches apart. Travelers in climbing are liable to encounter one or more of

these insects. The spider endeavors to entangle his victim in a strong web. This web consists of strong silky lines of a bright yellow color, several yards in length.

What method is usually adopted to repel these formidable insects ?

They are beaten down with stout sticks, and the fibers of the web are broken in the same manner.

Are the valleys of Kauai of special interest ?

**VALLEYS
OF KAUAI**

That of Hanalei is remarkably picturesque. It is covered with plantations and pasture lands, and a peaceful little harbor, with a fair sandy beach, fretted by the foam of the surf, defines its limits.

What are the chief agricultural interests in the Hanalei valley ?

The cultivation of coffee and the Bourbon bean, which latter is closely allied to that cultivated in Arabia Felix.

Does the Hanalei Valley possess any peculiar features ?

**HANALEI
VALLEY**

The vegetable remains seen there are of a highly interesting character. From two to four feet beneath the surface of the soil are found solid trunks of trees lying in horizontal position. In the upper part of the valley large marine shells are plentiful. With fine ocean sand, these shells form the lower stratum of the valley bed.

Where are the most remarkable caves of the Hawaiian group ?

A large extent of Kauai is cavernous, but the most interesting cavern is the one termed Niholua by the natives.

What are its peculiar features ?

The entrance, which is formed by a natural orifice in the roof. The floor consists of an unctuous slime formed by percolation through the roof.

Has this cave ever served any special purpose ?

CAVES

During a great epidemic multitudes took refuge there; it was also used as a hiding-place in time of war.

Where are the salt lakes situated ?

Four miles west of Honolulu is the celebrated salt lake of Alia-paakai. The whole region of the lake is strictly volcanic.

Has salt been extracted from this lake ?

Until very recently a self-formed salt was found there. It was considered excellent for the market and shipping.

SALT LAKE**Does the trade continue ?**

No; on account of the partial difference of the salt in the lake the trade has fallen off.

In what locality are the salt works ?

Extensive salt works are now carried on at Pulas, near the lake, the process is by evaporation.

Of what nature is the coast of the islands ?

Very steep; harbors are few.

What is the nature of the coast of the island of Hawaii ?

It is narrow, rising almost immediately to a lava plateau.

Where are the best harbors of the island of Hawaii situated ?

On the west side, between cape Kalae in the south and Opolu Point in the north; Kealakeakua, Kailua, and Kawaihae.

**HARBORS
AND
PORTS****Where is the best port of this island situated ?**

On the north coast, at Hilo Bay.

Are there any coral reefs near the island of Hawaii ?

There are a few near Hilo.

What railway communications are there on the island of Hawaii ?

One railway runs from Hilo to the plantation Waiakea; another from Mahukona through the Kohala district.

POPULATION.**What was the population in 1890 ?**

89,990.

POPULATION**What was the population of the separate islands in 1890 ?**

Hawaii, 26,754; Oahu, 31,194; Maui, 17,357; Kauai, and Niihau, 11,859; Molokai, Lanai, and Kalulaui, 2,826; total, 89,990.

How was the population of the Hawaiian Islands divided in 1896 ?

Natives, 31,019; half-castes, 8,485; Americans, 3,086; United Kingdom, 2,250; German, 1,432; French, 101; Portuguese, 15,191; Norwegian, 378; Chinese, 21,616; Japanese, 24,407; Polynesian, 455; other nationalities, 600; total, 109,020.

What are the leading characteristics of the natives (Kanakas) ?

Their admirable skill in technical work, their strength, and the high rank they hold among Polynesians in physical proportions.

**DECREASE
OF NATIVES**

Have the natives decreased since the white colonization ?

Yes; in 1778 there were approximately 200,000. The census of 1823 showed only 142,000; in 1890, only 40,000 were reported.

What are the principal causes of this decrease ?

At first, wars; later, epidemics, such as plague, measles, smallpox, and leprosy (carried in from abroad); and vicious habits acquired from colonists of the worst type. According to some missionary accounts, their vicious habits are inborn.

**HAWAIIAN
CHARAC-
TERISTICS**

What are the leading characteristics of the Hawaiians ?

They are good boatmen, splendid fishermen, and brave warriors. They are also excellent imitators, but are totally lacking in inventive skill.

What sports and pastimes are most in favor ?

Pugilistic exhibitions, racing, surf-swimming, music, singing, and dancing.

Have their musical instincts led to any useful results ?

Yes; under the leadership of a German conductor an excellent band of Kanakas has been formed.

What is a notable characteristic of the cities and ports ?

The life and movement in them is similar to that which animates the cities and ports of America and Europe.

**OCCUPA-
TIONS**

What are the principal branches of occupation ?

Agriculture, sheep and cattle raising. The silk worm is cultivated extensively.

What peculiarity is notable among the Chinese and Japanese ?

The small proportion of females, there being but 2,449 of the former and 5,195 of the latter nationality.

Of what nationality are the merchants, planters, and mechanics ?

American, English, and German.

Which island is particularly noted for its German population ?

Kauai, which is almost entirely in the hands of German planters.

Of what nationality are the field laborers ?

Portuguese, Hawaiian, Chinese, and Japanese.

**FIELD
LABOR**

What are the rates of wages on the Hawaiian Islands ?

Field labor, Portuguese and Hawaiian, \$16.00 to \$18.00 per month, without board; field labor, Chinese and Japanese, \$12.50 to \$15.00 per month, without board; brick-layers and masons (in Honolulu), \$5.00 to \$6.00 per day; carpenters, \$2.50 to \$5.00; machinists, \$3.00 to \$5.00; painters, \$2.00 to \$5.00 per day of nine hours.

How are domestic servants paid ?

Cooks, Chinese, and Japanese, \$3.00 to \$6.00 per week, with board and room; nurses and house servants, \$8.00 to \$12.00 per month, with board and room.

From what nations are the domestic servants usually selected ?

Domestic labor in Honolulu and in all parts of the islands has for many years been performed by Chinese males, who make excellent house servants. During the last four or five years the Japanese have entered the field. Japanese women are especially in demand as nurses for children.

**DOMESTIC
SERVICE**

Is the labor market well supplied ?

It is overstocked. Steamers bring many persons who seek employment, but they are, in the majority of instances, obliged to return disappointed.

Has European labor ever been imported ?

Yes; some years ago Germans were encouraged to immigrate.

Are there any homestead laws in Hawaii ?

Yes; under proper conditions as to citizenship, etc., land is granted on payment of a small fee. The grants are as follows: First-class agricultural land, 8 acres; second-class agricultural land, 16 acres; wet (rice or taro) land, 1 acre; first-class pastoral land, 30 acres; second-class pastoral land, 60 acres; pastoral-agricultural land, 45 acres.

**HOMESTEAD
LAWS**

Is school attendance obligatory ?

Yes.

What educational facilities are there ?**EDUCATION**

168 schools with 300 teachers and 10,712 scholars. (1892.) There is a manual labor school in the mission station of Hanalei.

In what language are the scholars instructed ?

Two-thirds are educated in English, the remainder being instructed in the native language.

Of the above number of pupils how many were girls ?

3,956.

How many of the 10,712 pupils were natives or of other nationalities ?

5,881 were Kanakes, 1,042 half-breed, 300 Americans, 191 English, and 175 Germans.

Do the reports show that there are any other schools ?

Yes; some secondary schools and three high-schools, one in Honolulu, one in Lahaiina, and one in Hilo.

What is the prevailing religious creed ?

Protestant; the Protestant missions are represented by five stations, four English and one American.

What was the number of Protestants and Catholics in 1884 ?**RELIGION**

29,685 of the former and 20,072 of the latter.

Is there any connection between the churches and the schools ?

No.

What footing have religious orders found here ?

There is an Anglican and a Catholic bishopric. Other sects have also established themselves.

Are the postal facilities good in the Hawaiian Islands ?

Yes; there is a regular postal system, and on the arrival of a steamer at Honolulu the mail is sent to the different islands and into the interior by mail carriers.

Do the Hawaiian Islands belong to the Postal Union ?**POSTAL SERVICE**

Yes; and money-orders can be obtained on the United States, Canada, Great Britain, Germany, Norway and Sweden, Denmark, the Netherlands, Portugal, Hongkong, and Australia.

How many post-offices are there and how many letters were sent ?

In 1890 58 post-offices transmitted 404,793 international and 1,136,236 inland (Honolulu) letters.

CITIES.

[For supplementary data on cities and towns, see text following this Catechism.]

Which city of Hawaii is recognized as the political capital ?

HONOLULU

Honolulu on Oahu.

How is Honolulu situated ?

Pleasantly, on the south side of the island. Except in the business blocks, every house stands in its own garden, and some of the houses are very handsome.

What are the most notable objects in Honolulu ?

The public buildings are attractive and commodious. The palace and parliament buildings are imposing.

Have modern municipal improvements been introduced ?

Electric lights are used for the thoroughfares, and there is a complete telephone system.

What methods of rapid transit exist in Honolulu for city service ?

Tram cars run at short intervals along the principal streets, and continue out to a sea-bathing resort and public park, four miles from the city.

**RAPID
TRANSIT**

Are any daily or other periodical publications issued in Honolulu ?

There are three evening daily papers, published in English, one daily morning paper, and two weeklies. Newspapers are also published in the Hawaiian, Portuguese, Japanese, and Chinese languages. There are several monthly magazines in various tongues.

VEGETABLE KINGDOM.

[For supplementary data, including lists of vegetables, fruits, flowers, trees, etc., see text following this Catechism.]

What percentage of Hawaiian acreage is in a fit state of cultivation ?

Only 5 per cent.

**AGRICUL-
TURAL
PRODUCTS**

What are the chief agricultural products of the islands ?

Sugar, rice, coffee, and bananas.

How many sugar plantations are there on the islands ?

SUGAR PLANTATIONS

Not less than 100, nearly all having their own mills. But there are seven especially large sugar mills in addition to these.

What was the sugar product in 1892 ?

122,279 tons, most of which was exported to San Francisco for refining.

What is the average export of sugar under favorable conditions ?

Exports to U. S., 1897, 431,217,116 lbs., valued at \$13,165,084.

Of what nationality is the labor employed on the sugar plantations ?

Japanese; imported since 1885.

MOLASSES— EXPORT

To what extent is molasses exported from Hawaii ?

The exports to the U. S., 1897, was 26,866 gallons, valued at \$1,529.

How are the fertile coast districts of Hawaii island cultivated ?

Large sugar, coffee, and orange plantations cover them.

Is coffee cultivated in Hawaii ?

Yes; it is considered by experts to be essentially the crop of the future, bidding fair to become as important a staple as sugar. It is estimated that, at the end of the fourth year, the return from a 75-acre coffee plantation will much more than pay running expenses, while, from that time on, a return of from \$8,000 to \$10,000 per annum may be realized.

COFFEE

Of what extent are the coffee plantations ?

The largest contain some 200,000 trees. The smallest occupy a few acres.

Are there opportunities for further development of the coffee industry ?

Yes; there are thousands of acres at present uncultivated, and only awaiting the enterprise of the people of the temperate zone to develop them.

What kind of coffee is successfully grown on the Hawaiian islands ?

Kona coffee, which is indigenous and is considered to be the finest coffee in the world.

Is this plant extensively cultivated ?

Not at present; the industry is in its infancy.

Are coffee planters able to cultivate other crops?

COFFEE PLANTING

Yes; in the belt in which coffee grows many kinds of vegetables and fruits can be raised, including green and sweet corn, Irish and sweet potatoes, cabbages, tomatoes, beans, lettuce, radishes, strawberries, and raspberries. These products grow during the whole year.

What other vegetables are cultivated by the Hawaiians?

Yams, bananas, and pumpkins. They also cultivate the Twa plant for their favorite intoxicating drink, and Taro, from which they make their favorite mushy dish called Poi.

What vegetation is very plentiful in these districts?

VEGETABLES

The coconut palm, pandanus, mango trees, bananas, and bamboo.

In what manner has the land been improved by Hawaiians?

They have irrigated vast dry plains, leading the water from the mountains by canals, many of which are several kilometers in length. By this means they have made the land very fruitful. Artesian wells have also been introduced.

Is Hawaiian soil especially good for fruit cultivation?

Yes; bananas, limes, tamarinds, oranges, pineapples, gooseberries, peaches, and the guava, grow freely, and present an excellent field in the future for American enterprise.

Are olives cultivated in the archipelago?

An attempt has been made to introduce plantations in the island of Kauai. This is the first effort to cultivate the olive in Polynesia.

Does the vegetation of the islands change at high elevations?

VEGETATION AT HIGH ALTITUDES

Yes; 1,000 feet above sea level a tropical type of forest formation becomes apparent and develops as the land rises.

Of what nature is the flora of the islands?

Very rich. There are at least 900 kinds of pot plants, of which 155 are ferns. Three-fourths of these are indigenous.

What forms of trees and plants grow in the various zones?

TREES AND PLANTS

On the coasts, the bread-fruit tree abounds, also the mulberry tree, and many luxuriant grasses. In the interior, in addition to the odoriferous sandal wood, grows the kuhui, a tree from the fruit of which the natives extract a dye for tattooing themselves. Ascending to the mountains, on the lower spurs are found thick groves of the koa or acacia, and, higher up, the tree-fern predominates in all its primeval glory.

Are other variations found at higher altitudes?

Yes; on the next higher ranges trees give place to shrubs which yield exquisite perfumes. At a greater height vegetation sprouts with more difficulty upon calcined soil of lava, and here the somber foliage of the chia is alone to be seen. The last vestige of vegetable life exhibits itself in the beautiful aloe called the "silver side," its leaves being covered with a fine metallic down, which shines resplendently when touched by the sun.

FLORA OF KAUAI

Which of the islands possesses the richest flora?

Kauai.

Does the appearance of the foliage change with the seasons?

As an intertropical country, Hawaii has no seasons, the trees being always green, and the flowers always in bloom.

Is sandalwood an article of commerce?

Yes; the natives traffic in it, principally with Canton. Forests of sandalwood grow on the declivities of the mountains.

From what tree were native utensils formerly made?

The koa or kou.

MINERAL KINGDOM.

[For details concerning minerals, including list of names, see text following this Catechism.]

MINERALS

Which are the principal minerals of the Hawaiian group?

Salt, niter, sulphur, quartz, and pyrites. So far the islands have not revealed any great wealth of minerals.

Are there any mineral springs?

In the island of Kauiaha there is a sulphur spring, the waters of which are found to be efficacious for rheumatic affections. Thermal waters are not known to be abundant.

What other minerals are known in the archipelago?

Sal-ammoniac, limonite, angite, chrysolite, garnet, labradorite, feldspar, gypsum, soda, alum, copperas, glauber salt, and calcite have been found.

ANIMAL KINGDOM.

[For details concerning animals, birds, insects, reptiles, etc., including lists of names, see text following this Catechism.]

**ANIMAL
KINGDOM****What is the character of the fauna of the Hawaiian islands?**

It belongs to the Polynesian subregion, which is of Australian character, but American elements occur.

Is cattle raising successful in the Hawaiian group?

Yes; horned cattle prosper well in the north of Hawaii.

What industry is largely confined to the island of Niihau?**MERINO
SHEEP**

Its entire surface is used for the raising of merino sheep.

Is this a prosperous industry?

Yes; on one farm alone there are not less than 20,000 sheep.

How is the wool from these sheep utilized?

For the making of the finest worsteds.

To what country and in what manner is most of this wool exported?

The largest quantities are sent to the United States, but owing to a scarcity of inland streams the wool can not be washed before shipment. It is therefore shipped in bulk, raw.

Are land birds found in great variety?

There are eighteen kinds, of which sixteen are indigenous. They include the splendid Nestarina, from the feathers of which the natives manufactured the royal robes of their kings.

What industry promises to develop beyond ordinary limits?**OSTRICH
RAISING**

The raising of ostriches. The ostrich farms already established have proved to be very successful.

Is the demand for pork large ?

Yes; the Chinese population consume more than the islands produce, necessitating a large import.

What is distinctive in the appearance of the Hawaiian dog ?

The feet of this animal are short and crooked, the body much elongated, and the ears stiffly erect.

REPTILES

Of reptiles, what specimens are represented ?

The gecko, lizard, and tortoise.

Are snakes and amphibious animals found in the archipelago ?

No.

FINANCE AND SHIPPING.

[For further details concerning commerce in the Hawaiian islands, see text and tables following this Catechism.]

What commercial resources do the Hawaiian Islands possess ?

At present Hawaii has to import almost everything she uses, having been heretofore entirely taken up with the raising of sugar, the entire crop of which goes to the United States. The United States, in 1896, took 99.64 per cent. of her exports, and sold her 76.27 of all imports. The desire is that everything should come from the United States, and, it is believed, that as one of the results of annexation over 95 per cent. of all the imports will be the growth, product, or manufacture of the United States.

**COMMERCIAL
REMARKS**

In what relation does Hawaii stand between America and Asia ?

No other point in the North Pacific has such a dominating relation as a place of call and depot of supplies for vessels.

**BEST
ISLANDS FOR
INVESTORS**

Which of the Hawaiian islands are best for investors and immigrants ?

Hawaii, Maui, Oahu, and Kauai. On these islands coffee, fruits, potatoes, corn, and vegetables can be raised by small investors, and land can be obtained on reasonable terms.

Is the consumption of liquor large ?

Yes; there were withdrawn from bond during the first half of 1897 362,243 gallons of all kinds of liquors, wines, and beers, or $3\frac{1}{2}$ gallons for each man, woman, and child on the islands. Of Japanese sake, 151,732 gallons were withdrawn, this quantity equaling over 6 gallons for each Japanese man, woman, and child. Of Chinese sam shoo, 9,230 gal-

lons were withdrawn, equalling $3\frac{1}{2}$ pints per capita for the Chinese. The large withdrawal of sake was probably due to an increase in duty.

What other liquors were most in demand during the first half of 1897?

California wine, 83,031 gallons; gin, 7,067.37 gallons; whiskey, 5,992.45 gallons; beer, 47,335 gallons.

LIQUOR

What are the freight rates between Hawaii and San Francisco?

For steamers, \$5.00 per ton and 5 per cent. primage; sailing vessels, \$3.00 per ton and 5 per cent. primage.

What are the freight rates to Atlantic ports?

From \$5.00 to \$7.00 per ton, with 5 per cent. primage.

What is the duration of the voyage between Hawaii and New York?

From 89 to 134 days.

Must commercial travelers have a license in the Hawaiian Islands?

LICENSES
AND

Yes; on the island of Oahu (Honolulu) the amount to be paid is \$570, and on each of the other islands \$255.

PASSPORTS

Are passports necessary when leaving the country?

Yes, if residence has been for more than thirty days. The fee for each passport is \$1.00, and must be paid by all adults.

Are passports granted without other restrictions?

No; if the applicant is liable for debts or other money obligations, or is defendant in a suit, or subject of a writ, or object of a complaint as to proper care of wife and family, the collector of customs is at liberty to refuse the privilege.

What restrictions are there as to the landing of aliens?

The following classes are forbidden: Idiots, insane persons, paupers, vagabonds, criminals, fugitives from justice, sufferers from loathsome or dangerous contagious diseases, stoaways, vagrants, and persons possessed of less than \$50 in money. Persons landing who can show a written contract of employment with a reliable and responsible resident, are not required to possess \$50 in money.

ALIEN LAWS

What is the tax on passengers arriving?

One dollar for each passenger entering the islands. This amount is a port charge, and is paid to the collector of the port. The collector can not grant a clearance to any vessel until this tax is paid.

**RECEIPTS
AND
EXPENDI-
TURES**

What were the total receipts of Hawaii during 1896?

\$2,383,070.78.

What were the total expenditures of Hawaii during 1896?

\$2,137,103.38.

What was the cash balance in the treasury at the end of 1896?

\$315,193.16.

What was the public debt of Hawaii for 1896?

\$4,101,174.25.

What internal taxes were levied in 1896?

Real estate, \$240,971; personal property, \$210,194; poll tax, \$46,665; horses, \$7,698; mules, \$1,837; dogs, \$6,302; carriages, \$5,889; seamen, \$7,255; roads and carts, \$90,297; school, \$89,443; total, \$706,541; tax per capita, \$6.48.

**IMMIGRA-
TION AND
EMIGRA-
TION**

What is the comparison of immigration to that of emigration?

The number of immigrants to Hawaii in 1893, was 5,672 (mostly Chinese and Japanese); number of Hawaiian emigrants, 3,929.

For what maritime purpose are the islands conveniently situated?

They are a favorite stopping place for whalers; seventeen whaling vessels entered the Hawaiian harbors in 1892.

How many vessels in 1898 sailed under the Hawaiian flag?

Steamers, 27; ships, 3; barks, 8; schooners, 18; sloops, 2. The aggregate tonnage of these vessels was 30,382.

Where were most of these vessels built?

Thirty-one were constructed in the United States.

How many passengers arrived at Honolulu in 1897, and whence did they come?

PASSENGERS

From San Francisco, 2,491; Oregon and Washington, 11; China and Japan, 8,267; Australia and New Zealand, 151; British Columbia, 197; South Sea Islands, 30; other countries, 232.

How many passengers left Honolulu in 1897, and for what destinations?

For San Francisco, 1,996; Oregon and Washington, 17; China and Japan, 4,101; Australia and New Zealand, 198; British Columbia, 188; other countries, 4.

Through which ports are trade relations usually carried on?

Kailua, Hilo, Mahukona, Kawaihae, and Honolulu.

How many vessels entered these ports in 1893?

315, with a tonnage of 323,685.

How many of these were American vessels?

219.

What percentage entered Honolulu?

95 per cent.

What important steamers stop at Honolulu?

The San Francisco, Auckland, and Sidney mail.

Which are the principal imports from U. S.?

In value (1897), iron and steel, and manufactures of; wheat, bread, and biscuit; sugar, refined; cotton, manufactures of; boards, deal, etc.; leather, and manufactures of.

What is the value of imports from U. S.?*

\$5,464,208 (1896); average for 5 years, \$4,496,273.

What is the p. c. of exports to U. S.?

Of the total trade, 91 per cent.

What are the principal exports?

Sugar, rice, bananas.

What dutiable article is largely exported to U. S.?

Wool, unmanufactured.

What important articles are sent to U. S. free of duty?

Sugar, rice, coffee, fruits, hides, and skins.

What was the value of free exports to U. S. (1897)?

\$13,663,012.

What was the value of dutiable exports to U. S. (1897)?

\$13,687,799.

VESSELS

IMPORTS

EXPORTS

* Taken from reports of Collectors of Customs of the Hawaiian Islands; for U. S. Report see page 167.

GEOGRAPHICAL NOTES.

ISLANDS

ISLANDS:—These, forming an archipelago, grouped in a lineal curve, and convex toward the north-northeast, are the following, from northwest to southeast:

Nihau, with the islets of Lehua, or Orihua; Kaula, or Tahura; Kauai, or Atowi; Oahu, Molokai, or Morotai; Sanai, or Ranai; Maui, Molokini, or Morotime; Kahulani, or Tahurema; Hawaii.

Honolulu, in the island of Oahu, is the capital.

CAVES:—On the north, Cape North, in the island of Kauai; on the south, Cape Kalaé, in the island of Hawaii; on the east, Cape Kopoko, in the island of Hawaii; on the west, the point of Kaoula.

STRAITS:—The large strait Alenouihaha separates Hawaii from Maui. Its form is irregular.

BAYS

BAYS:—Ouakiki, and of Saint George, on the south of Oahu, and the bay of Kaouéhoé, on the northeast, are insecure, and, altho of great depth, they only shelter small embarcations. The bays of Ouaiméa, on the south, and that of Hanalei, on the south of the islands of Kauai, and Wiatka are the only enclosed waters of importance.

PORTS:—Lahaïna, in the northeast of Maui; Hilo, in Hawaii, the best harbor in the island; the isthmus of Ouaiikapou is unsafe, it being constantly agitated by the northeast wind.

MOUNTAINS

MOUNTAINS:—These are mostly elevations of lava, surmounted in Hawaii, by the culminating crests Mauna Loa, Mauna Kea, and the volcano Mauna Verrorary. The east of Maui is a mountainous region, its culminating point being Mauna Eoka. In the island of Molokai, is the mountain Olokoui. The natives call Molokai the "Land of Precipices." In the island of Oahu are the two mighty chains, traversing in parallel direction from W. N. W. to E. S. E. The former is called Kaala and Ouaianaé. The second chain, Konahouanoui, is longer, but less elevated. The whole of the mountain ranges of the island are volcanic.

RIVERS

RIVERS:—The Kanaha, in the island of Oahu, is the most important stream of the archipelago. The north-eastern slope of Mauna Kea (white mountain) gives birth to a multitude of water-courses which precipitate themselves in cascades from the ledge of the table land, and form, in their lower course, picturesque valleys. The Hawaiian islands contain few running streams; but the island of Kauai has some small navigable rivers. The course of the river Ouailoukou ends in the roadstead of Hilo. The Weiraka falls into the bay of Wiatka.

VALLEYS:—The valley of Nououanou, in the neighborhood of Honolulu is one of the most beautiful regions

of the archipelago. In the island of Molokai, is the noted valley of Halaoua. The two valleys of Ouāiméa and Hanaleī, are the most fertile in the archipelago, and are resplendant in natural beauty and picturesque views.

VALLEYS

PROVINCES AND CITIES.

PROVINCES AND THEIR CAPITALS:—Hawaii, Hilo (residence of governor); Oahu, Honolulu (capital of whole archipelago); Maui, Lahaina; Molokai, village of Kalou-aha; Kauai, Waimea; Lanai, village of Lanai; Kahulawi, fishing village only (no name); Niikau, chief village Ka-oula.

PROVINCES

CITIES:—The capital of Hawaii is Hilo, a struggling town half hidden in sugar-cane and other vegetation, at the mouth of the Wailuku, in the bay of Hilo. It is the residence of the governor, and contains a custom house and court house. The population is 6,000, mostly foreigners. There are several churches and schools at Hilo.

In its suburbs there is very extensive sugar-cane cultivation, and 3 kilometers from the town the famous rain-bow water-falls, 25 m. in length, are situated.

HONOLULU (OAHU):—The protecting coral reefs make Honolulu an admirable harbor. It is the seat of the government. The streets are broad and dusty, being paved with lava and coral stones. The thoroughfares are lined with mango trees, acacias, mimosas, and palms. There are several churches, including one for natives and one for Chinese Christians. The city also contains a royal palace, finished in 1882, with a beautiful garden; a large parliament building, which contains the bureaus of the government; museum and library (in front of which a statue of Kamehameha I.), custom-house, bank, hospital, several large schools, an insane asylum, house of refuge, orphan home, an American mission seminary, Y. M. C. A. Institute, Masonic Temple, Odd Fellows' Hall, a German club, an English club, and a theater.

HONOLULU

Honolulu enjoys many modern facilities, including a telephone system, cabs, fire-engines, and other municipal conveniences.

VEGETABLE, MINERAL, AND ANIMAL KINGDOMS.

VEGETABLE KINGDOM—HAWAII.

VEGETABLES

Agricultural.

Sweet potatoes.	Squash, pumpkins.
The bottle-gourd.	Sugar-cane.
Manioc.	Yam.
Arum (edible root).	Asiatic vine.
Bermuda grass.	Castor-oil plant.

		<i>Trees.</i>
TREES	The olive tree.	A kind of acacia.
	Carob tree.	Bread-fruit tree.
	Tree-ferns.	Hibiscus, or okra.
	The mulberry tree.	Mimosas.
		<i>Fruits.</i>
	Citrons.	Strawberries.
	Raspberries.	Coco plum.
	Lemons.	Mulberries.
	Oranges.	Native apple.
	Shaddocks.	Tamarind.
		<i>Flowers.</i>
FLOWERS	The oleander.	Night-blooming cereus.
	Carnations.	Moonflower.
	Various kinds of lilies.	Nasturtiums.
	The Passion-flower.	Tea roses.
	The ti (native), emblem of peace.	The stephanotis. Violets.

MINERALS—HAWAII.

The few that merit especial mention are:—

Niter.	Sulphur.
Quartz.	Pyrites.

Mineral waters.

MAMMIFEROUS ANIMALS—HAWAII.

ANIMALS	Asses.	Horses.
	Goats.	Pigs, hogs, all swine.
	Cattle of all kinds.	Mules.
	Dogs (1 kind indigenous).	Rats in abundance.
	Sheep and other animals yielding wool.	

BIRDS—HAWAII.

Mallard duck.	Crows.
Geese.	Blue-eyed herons.
Sparrows.	A kind of humming bird,
Doves.	from the feathers of
Gray sand-piper.	which the natives make
Partridges.	the mantles of their
The landrail.	chiefs (4 species).
Gray thrush (one species).	

INSECTS—HAWAII.

Scorpions, large and small.	Numerous ants.
Centepedes.	The Japanese beetle (very
The common beetle.	destructive).
Mosquitoes (a pest).	

FISH—HAWAII.

FISH	Eels.	Dolphins.
	Sea slug or tripany.	The skate.
	Mother of pearl.	Oysters.
	Sharks, and numerous fish bearing native names only,	
	such as: Corbina, Hito, Bia, Manjuaries, etc., etc.	

COMMERCE.

STATEMENT SHOWING THE VALUE OF MERCHANDISE IMPORTED AT ALL PORTS OF THE HAWAIIAN ISLANDS, AND WHERE FROM, DURING THE YEAR 1897.

[From the annual report of the Collector-General of Customs to the Minister of Finance, 1897.]

COUNTRIES FROM WHICH IMPORTED.	Goods paying duty.	Spirits paying duty.	Goods bonded.	Spirits bonded.	Goods free by treaty.	Goods free by Civil Code.	Spirits free by Civil Code.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
United States Pacific ports.....	630,447.88	77,454.33	2,074.50	36,645.58	4,041,134.64	1,648,247.23	66,932.54
United States Atlantic ports.....	17,960.69	.....	41.04	.....	277,809.66	1,264.25	16.00
Great Britain.....	772,134.94	2,341.28	121.66	14,101.43	.....	77,081.94	.....
Germany.....	144,936.67	4,589.63	1.93	8,797.51	.....	33,019.27	1,587.18
China.....	242,139.50	338.19	3,924.40	13,368.64	.....	644.17	2.50
Japan.....	213,623.14	54,196.70	3,103.19	1,410.45	.....	19,977.86	5.00
Australia and New Zealand.....	19,001.99	.....	2.29	206.97	.....	103,241.94	.....
Canada.....	12,469.85	36.90	835.20	1,848.90	.....	43,484.07	.....
Islands of the Pacific.....	501.09	.....	.....	.....	.....	5,362.95	.....
France.....	12,951.99	98.75	.....	5,122.48	.....	1,405.86	11,418.24
Other countries.....	27,431.10	1,581.77	47,614.52	54.28	.....	132,056.43	.....
Total.....	2,093,598.84	140,637.55	57,718.73	81,556.24	4,318,944.30	2,065,785.97	79,961.46
At Honolulu.....	2,010,296.44	140,637.55	57,007.13	81,556.24	3,573,040.90	1,853,215.62	79,961.46
At Hilo.....	43,196.12	.....	.....	.....	384,728.47	122,299.49	.....
At Kahalui.....	30,077.74	.....	711.60	.....	227,700.50	58,608.20	.....
At Mahukona.....	10,028.54	.....	.....	.....	133,474.43	31,662.66	.....
Total.....	2,093,598.84	140,637.55	57,718.73	81,556.24	4,318,944.30	2,065,785.97	79,961.46

EXPORTS TO UNITED STATES.

ARTICLES.	QUANTITIES.		VALUES.	
	1896	1897	1896	1897
FREE OF DUTY.			<i>Dollars.</i>	<i>Dollars.</i>
Articles, the produce or manuf. of U. S. returned.			42,064	28,137
Coffee.....lbs.	131,343	376,484	25,063	68,441
Fruits, including nuts....			76,124	64,371
Hides and skins other than fur skins.....lbs.	1,064,686	1,122,290	65,104	71,750
Household and personal effects, etc., of persons from foreign countries..			9,625	9,600
Articles admitted free un- der reciprocity treaty with Hawaiian Islands:				
Rice.....lbs.	4,354,500	5,881,600	163,571	231,511
Sugar, brown.....lbs.	352,175,269	431,196,980	11,336,796	13,164,379
Molasses.....galls.	33,705	26,860	1,902	1,529
Wool, unmanuf'd...lbs.	211,617	229,877	16,238	17,366
All other free articles....			6,856	5,928
Total free of duty.....			11,743,343	13,663,012
DUTIABLE.				
Fruits, inclu. nuts, n. e. s..			8,776	14,626
Sugar, above No. 16 D.S.lbs.		20,136		705
All other dutiable articles.			5,585	9,456
Total dutiable.....			14,361	24,787
Total imports of mdse...			11,757,704	13,687,799
Imports of Gold.....				
Silver.....				

IMPORTS FROM UNITED STATES.

ARTICLES.	QUANTITIES.		VALUES.	
	1896	1897	1896	1897
DOMESTIC MERCHANDISE.			<i>Dollars.</i>	<i>Dollars.</i>
Animals.....			45,647	108,557
Books, pamphlets, maps, and other publications...			25,746	25,990
Bread and breadstuffs:				
Barley.....bush.	331,284	449,666	117,996	169,686
Bread and biscuit...lbs.	746,530	772,876	33,593	34,999
Oats.....bush.	73,637	104,037	22,388	39,166
Wheat.....bush.	13,920	13,163	9,086	10,716
Wheat flour.....bbls.	62,112	55,554	206,101	232,800
All other.....			129,006	136,299
Carriages, street cars, and parts of.....			26,063	69,465

IMPORTS.—Continued.

ARTICLES.	QUANTITIES.		VALUES.	
	1896	1897	1896	1897
DOMESTIC MERCHANDISE.			<i>Dollars.</i>	<i>Dollars.</i>
Chemicals, drugs, dyes, etc.			124,278	103,563
Cotton, manufactures of.			301,256	365,715
Fertilizers.....tons.	8,296	10,236	254,325	311,298
Fish.....			95,171	124,991
Flax, hemp, etc., manuf. of.			31,844	86,967
Fruits, including nuts.....			38,916	45,329
Glass, and glassware.....			19,347	23,654
Gunpowder and explosives.....			19,452	19,514
Hay.....tons.	6,027	6,931	66,832	74,525
India rubber, manuf's of.			23,780	30,382
Iron and steel, and manu- factures of.....			726,942	823,056
Jewelry and manufactures of gold and silver.....			6,620	4,710
Leather, and manuf's of:				
Boots and shoes. ..pairs.	53,050	61,409	107,076	122,512
All other.....			68,951	82,943
Lime and cement.....bbls.	19,413	b 26,825	17,923	b 22,420
Malt liquors.....			51,387	70,749
Oils:—Mineral.....galls.	669,309	456,654	92,397	71,773
All other.....			4,859	5,333
Paints and painters' colors.....			34,700	44,263
Paper, and manuf's of.....			36,537	42,806
Provisions, comprising meats and dairy prod's:				
Bacon and hams.....lbs.	246,362	198,771	31,458	26,313
Beef, canned.....lbs.	250,020	249,060	35,808	36,688
Butter and cheese.			34,004	33,881
Lard.....lbs.	342,790	318,470	26,803	22,352
Pork.....lbs.	25,912	29,025	1,978	2,023
All other.....			25,525	25,022
Spirits distilled :				
Whiskey.....galls.	12,792	20,132	21,399	31,422
Sugar, refined.....lbs.	822,378	755,164	37,440	34,140
Tobacco, manufactures of.....			174,100	171,315
Vegetables.....			27,188	31,183
Wine.....galls.	160,297	165,666	72,668	71,511
Wood, and manufact's of:				
Boards, deals, planks, joists, scantling...M feet.	21,441	24,400	210,934	238,784
Shingles.....M.	13,520	13,836	17,027	17,553
Household furniture.....			66,022	96,573
All other.....			72,565	92,419
Wool, manufactures of.....			51,614	56,543
All other articles.....			283,435	330,678
Total domestic mdse.....			3,928,187	4,622,581
TOTAL FOREIGN MDSE.....			57,520	67,494
Total exports of mdse....			3,985,707	4,690,075
Exports of Gold.....			710,190	975,088
Silver.....			17,500	116,100

a Includes cycles and parts of.

b Lime only.

**TOTAL VALUE OF IMPORTS INTO AND EXPORTS (EX-
CLUSIVE OF GOLD AND SILVER) FROM THE
UNITED STATES.**

YEAR ENDING—	IMPORTS.		EXPORTS.	
	Free.	Dutiable.	Domestic.	Foreign.
June 30—	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1880.....	4,565,918	40,526	1,985,506	100,664
1881.....	5,517,737	15,263	2,694,583	83,489
1882.....	7,621,690	24,604	3,272,172	78,603
1883.....	8,195,937	42,524	3,683,460	92,605
1884.....	7,900,000	25,965	3,446,024	77,329
1885.....	8,817,067	40,430	2,709,573	78,349
1886.....	9,741,924	63,783	3,115,899	76,799
1887.....	9,892,889	29,186	3,520,593	101,436
1888.....	11,050,038	10,341	3,025,898	59,305
1889.....	12,832,910	14,830	3,336,040	39,621
1890.....	12,309,758	4,150	4,606,900	104,517
1891.....	13,865,648	29,949	4,935,911	171,301
1892.....	8,062,076	13,806	3,662,018	119,610
1893.....	9,087,856	58,911	2,717,338	110,325
1894.....	9,969,981	95,336	3,217,713	88,474
1895.....	7,870,304	18,657	3,648,472	74,585
1896.....	11,743,343	14,361	3,928,187	57,520
1897.....	13,663,012	24,787	4,622,581	67,494

TRANSPORTATION NOTES.

RAILROAD TRANSPORTATION AND FARES FROM NEW YORK TO EMBARKING POINTS.

New York via Denver to San Francisco, by the Lehigh Valley or Baltimore and Ohio Railroad; first class, \$78.75.

New York via Denver to San Francisco, via Pennsylvania or New York Central; first class, \$81.75; second class, \$69.75.

New York to Seattle, by either of the same lines; first class, \$81.50; second class, \$69.75.

The fares from New York to Tacoma are the same as to Seattle.

New York via St. Paul to Vancouver, by the New York Central; first class, \$81.50; second class, \$69.75.

New York via Montreal to Vancouver, by the Canadian Pacific; first class, \$68.75; second class, \$62.75.

STEAMERS.

Occidental and Oriental and Pacific mail steamers leave San Francisco weekly for Honolulu; fare, \$100.00; time occupied, six to seven days.

"Oceanic" steamers leave San Francisco for Honolulu at irregular periods; fare, \$75.00; steorage, \$25.00.

Japan-America Line steamers leave Seattle monthly for Honolulu; fare to Honolulu, first class, \$75.00; second class, \$50.00; third class, \$21.00.

Canadian Australian steamers leave Vancouver monthly for Honolulu; fare, \$75.00.

The Sidney mail line touches at Honolulu, also the mail steamships from San Francisco to Auckland.

A number of fine sailing vessels make regular trips between Port Townsend and San Francisco, and Honolulu, with limited passenger accommodations. Rate, \$40.00 for cabin passage.

STEAMERS

RAILROADS ON THE HAWAIIAN ISLANDS.

There are three railroads on the islands. The Kahului Railroad, on the island of Maui; the Hawaiian Railroad, on the island of Hawaii. These two roads are used principally to carry the products of the plantations to the various points of shipment. The principal road on these islands is the Oahu Railway and Land Company line, which runs from Honolulu to Waianae.

ISLAND RAILROADS

MILEAGE.

Postal routes—New York to San Francisco, 3,250 miles; New York to Honolulu, 5,645 miles.

Distance by rail—New York to San Francisco, 3,634 miles.

Distance, Vancouver to Honolulu, 2,410 miles.

Distance, San Francisco to Honolulu, 2,080 miles.

Railroads on the island of Hawaii, 24.8 miles; on the island of Oahu, 24.2 miles; on the island of Maui, 6.8 miles.

Telegraph lines—Hawaiian islands, 248.4 miles.

Telephone lines—Hawaiian islands, 190 miles.

MILEAGE

WEIGHTS AND MEASURES.

The weights and measures of Hawaii correspond with those of the United States.

CURRENCY.

American gold, silver, and paper is used throughout; often the natives divide the dollar into 8 reales, instead of 100 cents. The gold is all of American mintage.

Payments over \$10 have to be made in American gold. Copper coins (one cent pieces), are of the year 1847. Hawaiian money is paper, very little of which is seen in circulation, and silver. The paper money is covered by silver held in reserve. The banks keep two accounts with their depositors, silver and gold.

WEIGHTS AND MEASURES

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SECTION V.

MARIANA ISLANDS OR THE LADRONES.

HISTORICAL.

The Marianas were discovered by Fernando Magellanes (Magellan), on the 6th of March, 1521. This was the first archipelago of Oceanica seen by Europeans. Magellanes sailed between the islands called Guam and Zarpana, now known as Guaján and Rota. He at first gave the chain of the islands the name of Velas Latinas (Lateen sails), on account of their triangular form, and the picturesque appearance they presented when seen from a distance, as of white sails lying prone on the waves.

DISCOVERY

The discoverer's experience of the dexterity of the natives in appropriating whatever came within their reach, caused him subsequently to substitute the appellation Ladrones (thieves) to these islands.

The 23d of January, 1565, witnessed the arrival of the squadron of Don Miguel Lopez de Legaspi at the Ladrones or Chamarros, a name signifying "friend," which the natives had retained. He took possession in the name of Spain.

ORIGIN OF NAME

In 1668 the islanders were converted to Christianity, when Queen Mariana, wife of Philip IV., in whose honor the islands had been renamed, despatched missionaries with a sum of money to be expended in founding a school for the education of the Indians. She contributed also 24,000 pesos for the defense and cultivation of the islands. From that time commerce was permanently maintained between Manila and New Spain, and by the desire of Queen Mariana these islands were used as a victualing station between Manila and Acapulco (Mexico).

CHRISTIANITY
ACKNOWLEDGED

The years between 1668 to 1699 are mostly notable for the advance of Christianity in the whole archipelago. The renowned Diego Luis de Sanvítores, a scion of a noble house of old Castile, gave up his brilliant prospects at court to enter the Jesuit order and become the "Apostle of Marianas." He founded many churches and three seminaries, and established the Catholic faith in thirteen islands. He was killed in 1672. A monument to his memory still exists at Agaña.

**PIRACY AND
REBELLION**

On the 18th of June, 1678, Vargas, the newly appointed governor of the Philippines, whilst traveling to his post, landed on the Marianas, and left there a few troops for their defense. Some time previously, insurrections had broken out, and brutal massacres, committed both on Spaniards and natives, by the Indians of the northern coasts, had taken place. The rebels were, for a while, subdued; but in 1690, insurrection, piracy, and murder were so prevalent, and the means of defense proportionately inadequate that the colony was nearly lost to Spain.

This blow was mainly averted through the tact of the acting governor, Quiroga.

**STORM
VISITATION**

During a brief interval of peace the Marianas were visited by a terrific hurricane. It began on the night of Nov. 26, 1693, by an impetuous wind, accompanied by thunder and lightning, together with a fall of water so prodigious that it resembled a deluge. The wind passed from north to south, and the sea uprose in such a manner that it was feared the island of Guaján would be engulfed. The waves rose mountain high, and, breaking their limits, spread over the islands, sweeping away trees, houses, and whole villages. Even the fort of Agaña could not resist the shock of these volumes of water; it was overthrown and buried in the boiling surf. The sacrifice of human life was enormous; the destruction general, yet the neighboring islands escaped with comparatively little damage. The worst horrors of this great tempest had fallen upon the island of Guaján (or Guam) alone.

**THE FLYING
PROA**

The appearance of the flying proas in the vicinity of the Marianas filled the early voyager with consternation. A recent writer declares that they would do credit to any civilized nation. These boats always sail with the same side to the wind, and a long outrigger on the windward side is so contrived as to prevent the possibility of capsizing.

Van Noort, the first Dutch circumnavigator, says that "some two hundred of these proas and their rowers would come to trade, calling 'hierro,' that is 'iron,' running, in their eagerness, their proas upon the ships." Van Noort also reports that these natives were hospitable, coming miles to meet him with all sorts of refreshments in exchange for iron.

The history of these islands during the past three hundred years is little else than that of a chain of administrators, appointed by the governor-general of the Philippine Islands. General Marina, the last governor, was, with his secretary and others, taken

prisoner by the commander of the cruiser *Charleston*, June 24, 1898, when the United States took possession.

By the terms of the treaty of peace, signed at Paris on December 10, 1898, Guam was ceded to the United States.

**AMERICAN
OCCUPA-
TION**

CATECHISM.

GEOGRAPHICAL.

[For supplementary geographical data, see text following this Catechism.]

Where are the Marianas or Ladrone Islands?

They constitute an archipelago of the Pacific ocean, situated in the northwest.

LOCATION

By whom were the islands named Ladrones, and why?

They were so named by Magellan, who discovered them, on account of the propensity of the natives for thieving.

When were these islands first known as the Marianas?

In 1668, when they were annexed to Spain.

In whose honor were they so named?

In honor of Mariana of Austria, the wife of King Philip IV. of Spain.

What is the position of the islands with reference to the Philippines?

They are situated to the east of them. They are to the southeast of the Japanese archipelago, and to the northwest of the Carolina Islands, between 13° and 21° north latitude, and 141° to 146° east longitude.

What islands form the Marianas?

Guam, Rota, Tinian, Aguijan, Saypan, Tarallon de Medinilla, Anatajan, Sarigan, Guguan, Almagan, Paragan, Agrigan, and three others.

ISLANDS

Are all of the islands inhabited?

No, only the first five.

Of what description are the other islands?

They are small, and of volcanic origin, as are the others, but their surface presents active and extinct craters.

What is the nature of the surface on the inhabited islands?

Partly mountainous.

What is the aggregate area of these islands?

420 square miles.

What is the area of Guam ?

Its estimated length from southwest to northeast is 27 miles; breadth, from 3 to 10 miles; area, 198 square miles; circumference, 100 miles.

What is the extreme point of the island of Tinian, and what peculiarity does this island exhibit ?

**TINIAN
ISLAND**

Cape Lago is the extreme point, and the island is remarkable for being entirely void of rivers and streams. It is watered by small lakes called "jogois." These lakes are full throughout the year.

CLIMATE.**What is the nature of the climate in the Marianas ?**

Balmy, and cooler than that of the Philippines as a whole, but very warm during August and September.

CLIMATE

How are the seasons in the Marianas divided ?

There are two distinct seasons, the wet and the dry. The dry season occupies the interval between October and May; the wet season continues the other four months.

How do the winds influence the climate ?

They cause the distinction of the seasons. The trade-wind from the northeast is the predominant breeze of the dry season; but during the rainy season it is entirely overcome by the winds from northwest and southwest. The southwest wind increases in velocity as it advances toward the straits which separate the Marianas from the Philippines.

What can be said of earthquakes and hurricanes ?

**EARTH-
QUAKES AND
HURRICANES**

Slight shocks are frequent in Guam. The inhabitants entertain greater dread of the hurricanes, which occur frequently, especially in the middle of September and November.

Is the climate of Tinian island considered healthy ?

No; it is unwholesome. A leper hospital has been established there.

HARBORS.**What harbors are found at Guam ?**

Caldera de Apra, the bay of Umatok, and the harbors of Agaña and Tepungan.

Are there any bays in the archipelago ?

Yes ; the principal ones are the bay Magician on the southeast of the island of Saypan, and the port of Tanapac, on the west side. The former is a wide roadstead, and the latter is the best port after that of Caldera de Apra.

BAYS**POPULATION.****What is the population of the Marianas ?**

According to census (1887), 10,170.

What is the character of the population ?

It consists largely of natives, called Indios Chamorros, who have a strong resemblance in form and feature to the Tagals and Visayas. There are also a number of immigrants from the Caroline Islands.

What are the characteristics of these people ?

The natives are sluggardly and degenerating; those who have immigrated from the Carolines are strong, healthy, and industrious. These latter reside chiefly on Saypan island.

**NATIVE
CHARACTER****Is the population equally distributed ?**

No; the distribution is variable, the greatest being concentrated on Guam on the south.

What is the population of Guam ?

According to the census of 1887, the population numbered 8,561.

Where is the remainder of the population chiefly distributed ?

Principally among ten villages, which are all that remain of the 180 towns which existed in 1668.

Have efforts to Christianize the natives produced any unexpected results ?

As in Hawaii, the inhabitants have been more apt in learning and adopting the vices than the virtues of their Christian exemplars. The original native simplicity has given place, in many instances, to licentiousness and degraded habits.

HABITS**CITIES.**

[For supplementary data concerning villages in the Marianas, see *Geographical Notes following this Catechism.*]

What is the capital of the Marianas ?

San Ignacio de Agaña.

How is Agaña situated ?

On a beautiful plain on Guam island, surrounded by forests of palms. Agaña is strongly fortified. It contains several beautiful churches and three convents, and was formerly the seat of the Spanish governor. Its population is estimated to be 4,000.

**TOWNS AND
VILLAGES**

What other towns are there in the Marianas?

Urak, the most northerly of the group; Tinian containing many ruined old temples, and Saypan, renowned for its pearl fisheries.

How are the sites of the abandoned villages now occupied?

By jungle, ruined forests, and tracts of marshy plains.

VEGETABLE KINGDOM.

[For supplementary data, including lists of vegetables, fruits, flowers, trees, etc., with Spanish equivalents, see text following this Catechism.]

What is the nature of the soil in the Marianas?

Usually, it is fertile and well drained.

What is cultivated on these islands?

Rice, maize, cotton, indigo, sugar, cocoa, and tobacco.

Is the island of Guam fertile?

Yes; but much remains uncultivated.

**VEGETABLE
PRODUCTS**

What are the characteristics of the flora in the Marianas?

It is similar to that of the Asiatic archipelago. The alimentary plants are the same as those found in every part of Oceanica.

What trees are peculiar to the Marianas?

The ifilf, yielding a wood of remarkable toughness, which is entirely employed for building purposes, and the Rima, or Lemay, a large fig-tree. The wood of this tree is used for building canoes, and the fruit, which is about the size of a melon, is healthy and palatable.

Have any trees been imported into the Marianas?

TREES

Yes; a kind of manioc, called Mendioca, also the Cacahuate, or Mani, from which a rich oil is extracted.

MINERAL KINGDOM.

[For note concerning minerals, see text following this Catechism.]

ANIMAL KINGDOM.

[For details concerning animals, birds, insects, reptiles, etc., including list of names with Spanish equivalents, see text following this Catechism.]

What species are represented in the fauna of the Marianas?

Only the rat and bat in the land fauna; among rep-

tiles, the Indian crocodile, turtle, and poisonous sea-snakes. Trepang fish are plentiful.

What European animals have been successfully imported and raised?

ANIMALS

Horses, sheep, pigs, deer, asses, and fowl.

SHIPPING.

Are there any obstacles to navigation near the Marianas?

There are many coral reefs which aid in forming good harbors, with the exception of those on the north of Guam, which obstruct all navigation.

TRANSPORTATION.

What can be said of the interior roads of communication on Guam?

For the accommodation of the people in the interior a highway has been constructed of saplings. This, starting from Agaña, passes the banks of Amgua and Asán as far as Tepuguán and reaches the Pantalan of Point Pite, the landing place of the port of Apra.

There are nine bridges in good repair.

**HIGHWAYS
AND ROADS**

Is this the only highway communication?

No. There is another from Tepugnán to Agat, the third part of which terminates in a marsh, which absorbs the waters caused by inundations. This marsh is crossed by sixteen bridges, all in bad repair, owing to lack of funds. A third road exists between Umatak and Marizo. It is a craggy path, and from Marizo to Inaraján, it degenerates into a rugged trench, through which native small carts are dragged.

GEOGRAPHICAL NOTES.

The islands at present capable of colonization are Guam, Rota, Tinian, Aguijan, and Saypan.

The remainder of the group are mostly volcanic and rocky, and on some of them subsistence is impossible owing to the lack of water.

The island of Rota is remarkable for being almost surrounded by coral reefs of immense height. This island has but one village, Sosanhaya, called by courtesy its capital.

ISLANDS

The northern group of islands, called Gani by ancient inhabitants, are more sterile and rocky than the southern group. The number of islands in this group has been estimated at sixteen. They, too, are volcanic

and rocky, with the exception of the shores of the island of Grigan, which are more verdant, and form a refuge for animals formerly introduced by the Spaniards.

PORTS

PORTS:—The capacious port of Apra on the west side of Guam, and the small ports of Agaña and Tepungan. On the south is the bay of Umata. This and Apra are the only large and reliable ports of Guam. There are others fit only for canoes and small coasting vessels.

MOUNTAINS:—Most of the mountains in the Marianas are small elevations of conical form, separated by narrow valleys. On Guam, however, the Ilich reaches a height of 1650 feet. The Vigie or Oumatak, and Jinkian, or Jenjo, are also prominent.

On the north, the magnificent peak of Santa Rosa, and on the west the Mount Jiniquio are acclivities of considerable dimensions.

VEGETABLE, MINERAL, AND ANIMAL KINGDOMS.

Spanish names with English equivalents.

VEGETABLE KINGDOM—MARIANAS OR LADRONES.

Agricultural.

AGRICULTURAL PRODUCTS

Calabazas.....	Pumpkins.
Caña de Azucar.....	Sugar-cane.
Concombres.....	Cucumbers.
Melones.....	Melons.
Pepinos (Introducidos por los Españoles) y otros aproximados al reino vegetal de a las Filipinas, pero menos abundantes.	A kind of small cucumber, (Introduced by the Spaniards) and others very similar to the vegetable kingdom of the Philippines, but less abundant.

Trees and Woods.

TREES AND WOODS

Merecen noticia:	Deserve notice:
El árbol <i>ifilf</i> da una madera de gran dureza.	The tree called <i>ifilf</i> (a kind of yew), which yields wood of great solidity.
El rima, cuya madera se emplea para canoas.	The <i>rima</i> , a kind of huge fig-tree; the wood is used for constructing canoes.
El cocotero (muy abundante)	The coco-tree (very abundant).
El mango.....	The mango-tree.

El molave, da una madera muy amarga y incorruptible.	The molave-tree, which yields a very bitter and incorruptable wood.
El yergo (escaso).....	The dwarf elder-tree (scarce).

Fruits.

El lemay.....	A very large fig.
Mangas.....	Mangoes.
Naranjas.....	Oranges.
El pequeño limon de China...	The small China lemon.

FRUITS

Flora.

La flora des las Marianas se aproxima à la de las Filipinas; merecen noticia:	The flora of the Marianas is very similar to that of the Philippines; the following are peculiar to the island:
Varias Orquideas, abundantes y magnificas.	Various orchids, abundant and magnificent.
Algunos Helechos.....	Some kinds of ferns.

MINERALS.—MARIANAS OR LADRONES.

En minerales no hay antecedentes que exista ninguno. (Guía oficial de Filipinas.)	In minerals there is no sign that any exist here. (The official guide to the Philippines.)
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MINERALS

ANIMALS—MARIANAS OR LADRONES.

Cabras (escasos).....	Goats (rare).
Carabaos, salvajes y mansos.	Buffalo, wild and tame.
El Cimarrón.....	Wild dog of the mountains.
Mulas (raras).....	Mules (very rare).
Ratones.....	Rats.

BIRDS—MARIANAS OR LADRONES

Las aves de las Marianas se aproximan à las de las Filipinas; peculiares à las islas son:	The birds of the Marianas are similar to those of the Philippines — some peculiar to these islands are:
La acalanta.....	The parrot-finch.
Gansos negros con pies de papagays.	Black geese with parrot feet.
Pigeones verdes	Green pigeons.
La padda de la China; muy devastador en los sembrados de arroz.	The Chinese paddy or rice bird; very destructive in the rice fields.

BIRDS

INSECTS—MARIANAS OR LADRONES.

INSECTS

Insectos muy raros.....	Insects very rare.
Algunas Arañas	Some spiders.
Mosquitos.....	Mosquitoes.

FISH—MARIANAS OR LADRONES.

FISH AND
REPTILES

La fauna marina es muy nu- merosa, pero tiene por el mayor parte nombres indi- genos.	Marine animals are very numerous, but the names are mostly native ones.
Ballenas	Whales.
Delfines.....	Dolphins.
El pez sierra.....	The saw-fish.
Tortugas (dos especies).....	Tortoises, two kinds.

REPTILES—MARIANAS OR LADRONES.

Los reptiles se representan por una serpiente muy com- un en el archipel, llamada:	The reptiles are repre- sented by one serpent very common in the archipelago, called:
Typhlops Bramineus.....	Typhlops Bramineus.
Lagartos (varios).....	Various lizards.

WEIGHTS AND MEASURES.

WEIGHTS
AND
MEASURES

No definite information is at present obtainable under this heading. Being until recently a Spanish possession, Spanish weights and measures have hitherto been officially recognized.

CURRENCY.

Commercial transactions are usually carried out by exchange of goods. Spanish and American coins are in use. Formerly shells were tendered as payment for purchases.

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